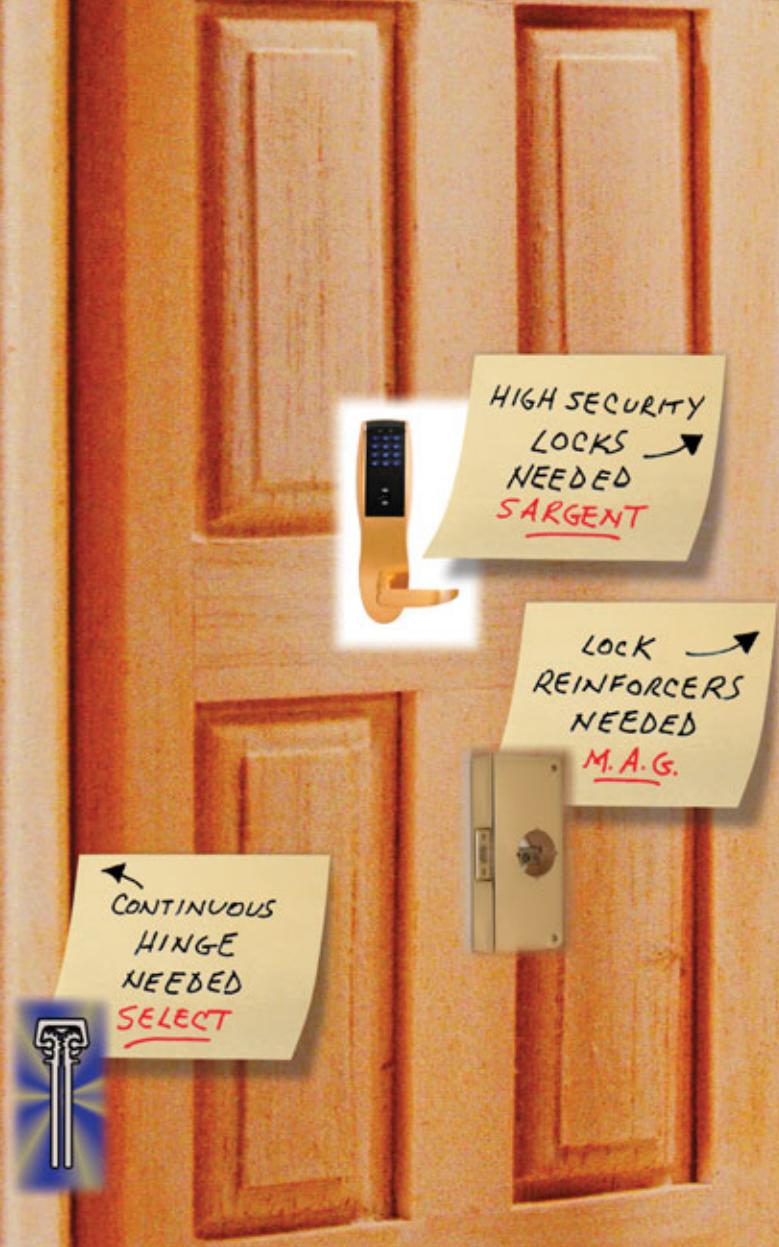


# The National Locksmith®

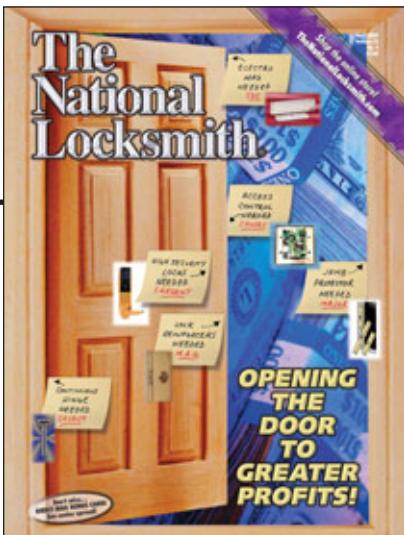


Don't miss...  
**DIRECT MAIL BONUS CARDS**  
See center spread!



**OPENING THE DOOR TO GREATER PROFITS!**

**On The Cover...**



Reap the profits from total door security and hardware installations with products from Select, M.A.G., Cansec, Major, Sargent and SDC.

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# COMMENTARY



[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

A few days ago I asked a friend where he would choose to live if he could reside any place in the world. He thought about that for a few moments, then he replied that he would live anywhere he had a good internet connection.

Personally, I'm a little pickier about my surroundings. I love Chicago for its architecture, culture, fun, beaches, parks and atmosphere. But one of these days I'd like to wake up on a morning in February and find out that the weather is going to be sunny and 75 degrees out, just like yesterday, and the day before.

But you know what? I'm still going to want a good internet connection too! I remember how reluctant I was to part with my IBM Selectric typewriter in favor of my new, little plastic looking word processor. This was back in the middle 80's, and the IBM was a chunky, solid machine that could rupture a couple of vertebrae if you hefted it too often. The word processor was not only incomprehensible, but it couldn't have weighed more than four or five pounds.

Frankly, from the beginning I just didn't trust the darn thing. Oh sure, I could read my words on the dinky screen, but I didn't trust those flimsy plastic disks for storing my articles. Now, when I think back on the concept of a little whirling ball striking letters through a ribbon of black film, I realize I don't miss the technician who used to call on me twice a year to keep all those IBM moving parts, well, moving.

Twenty years ago there wasn't a locksmith business that used a computer for much more than watching toasters fly around the screen. If we wanted information, we turned to a huge bookshelf solidly packed with code books for example.

Today, we can barely sell a paper code book. Everyone wants their codes on computer, and not only that, but most every book we now publish on paper also comes out on CD. Even those trusty back issues of *The National Locksmith* are put onto CD, and I quit saving paper back issues a long time ago.

## On sunshine and Selectrics...

Locksmithing is all about information. As a 'smith, you have to know everything about security ranging from cars and safes to doors and desks. Now it's easier than ever before to find the data you need by popping in a CD and looking it up, or going onto [TheNationalLocksmith.com](http://TheNationalLocksmith.com) and asking your fellow locksmith for a push in the right direction.

We still enjoy holding the paper copy of this magazine in our hands every month though. But I still think that the cost and speed of color printers are going to get better and better with time. One of these days, you might receive your magazine by e mail, seconds after it is prepared, and print it out in a couple of minutes in color, right there at home or in the office.

So I don't much miss my IBM Selectric as much as I used to. I'm saving it for a few more years though. One of these days I'll put it on Ebay as an antique. Yes, you and I have had to keep up with the times. But I think we'll both be around for a long time to come. Sure, biometrics might someday make the common key look as primitive as a Royal manual typewriter. But as long as there's someone around to covet his neighbor's goodies, locksmiths will be there to clean up the mess.

I wonder if they have good internet connections in Cuernavaca, Mexico?



*Marc Goldberg*

**Marc Goldberg**  
Publisher

**Have questions? Want free technical help?  
Free Locksmith Forums!**

[www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)

# Mango's Message

**T**here has been quite a stir generated by an article that was published in *The New York Times* newspaper a few months back. On February 22, 2002 reporter Matthew L. Wald, wrote an article titled "Why Keys Cost a King's Ransom." The story was about the high cost of automotive transponder key duplication and the limited service resources available to customers.

Wald stated that automotive keys that once cost a buck or two to duplicate, can now cost as much as a monthly car payment. One Virginia Lexus dealer he surveyed informed him that a replacement key to an RX 300 would cost \$300. A Ford dealer said a Taurus key cost \$130.

Wald went on to say that dealers have the market mostly to themselves, because very few locksmiths, or hardware stores, can copy the keys to late-model cars, stating that: *"The technology is beyond their capabilities."*

The article went on to describe the basic operation and design of a transponder system, its security, and why it was designed – which we all know was to deter theft.

Wade then did an interview with Randy L. Simpson, president of the Associated Locksmiths of America (ALOA). His interview with Simpson created the buzz.

Simpson was quoted as saying the following. I have extrapolated only the paragraphs that include or refer to Simpson, and will number each paragraph for reference.

1. Moving to the transponder system has had several effects. One is to cut out locksmiths. *"It can run up to \$50,000 for the equipment to duplicate the keys for cars,"* said Randy L. Simpson, president of the Associated Locksmiths of America, a trade association based in Dallas. And that is for each manufacturer; equipping a shop to make keys for all car brands would be well beyond the means of most locksmiths.

2. Mr. Simpson said a glance at older cars would explain why a new key system was needed. *"Mechanical devices were defeated in all kinds of different ways,"* he said.

3. One way to defeat a mechanical key is simply to pry the whole lock mechanism out of the steering column and connect the internal wires. But that will not allow a car with a transponder to start because hooking up the wires does not send the proper code to the engine-control module, the computer that runs the fuel-injection system.

4. Another effect is that the car owner is now at the mercy of the dealer's service department. The amount the dealer charges to make a key partly depends on labor rates, and partly on how the lock system is made.

5. For example, on a 2001 Ford Taurus, the car can "teach" a key the proper code. But it is built to do so only if the technician starts the car with one of the keys that

## A Missed Opportunity for Locksmiths

came with the vehicle, turns it off, starts the car with the second key that came with the vehicle, turns it off, and then inserts the new key - with the metal shaft, mechanically cut and the transponder unprogrammed and awaiting instructions.

6. Lose one of the factory keys and the procedure is much more involved; it means making two new keys and teaching both of them the code, Mr. Simpson said. The Ford dealership here charges an hour's labor for that, at \$85 an hour, plus \$45 for the key.

7. The Lexus key is a bit more complicated. Its oversize head includes not only the transponder but also keyless-entry buttons.

Simpson is then not referred to until the very last paragraph in the article, where he references transponder security and the impact it has had on auto thieves, saying:

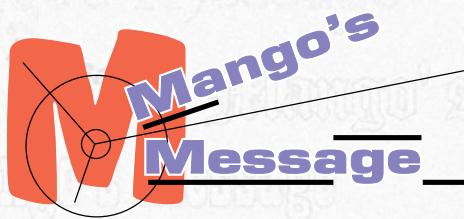
8. But however good the system is, Mr. Simpson of the locksmiths association said this was not the last step in car security.

*"They haven't defeated it yet,"* he said. *"But I'm sure it's just a matter of time."*

After first reading this story, I must admit I was a bit dismayed and shocked at Simpson's comments. The *New York Times* has a

**Continued on  
page 8.**





**Continued from page 6**

weekday readership of 1.1 million, and another 10 million who visit their web site. As the president of ALOA, I initially viewed this as a missed opportunity for Simpson to promote locksmiths and the services they offer to a very large audience. Instead of saying that locksmiths were a viable alternative to dealers for such services as transponder duplication and origination, he was interpreted to say that locksmiths were not an option for such services, and the dealer is the only choice customers have. That doesn't do, or say much for the industry, does it? Especially when the statement comes from the president of a national locksmith association.

After closer examination of this article, however, I believe the interview with Simpson is a bit ambiguous and misleading. I questioned whether it was really a missed opportunity by Simpson, or a manipulated opportunity by Wade. Not necessarily manipulated in a vindictive intentional way, but to slant a story for more interest.

In all eight paragraphs where Simpson is mentioned, or inferred to, only four sentences contain quotations.

Quoted sentences (" ") usually indicate that the prose presented is a first hand account as described, and transcribed explicitly by the reporter. Non-quoted sentences usually indicate that the reporter or writer paraphrased the prose presented. In other words, it may not have been exactly what was said, but an interpretation of what was said. This is commonly done because of space limitations, or because the reporter or writer wanted to present a predetermined angle or slant to the story. All it takes is the manipulation or elimination of a few key words here and there, and the story takes on a whole new meaning from what was initially told.

I'll admit I am dissecting this story to give Simpson the benefit of the doubt. In my opinion, the most damaging implied reference Simpson said, which is not in quotes is: *Equipping a shop to make keys for all car brands would be well beyond the means of most locksmiths.*

You may think that the most outrageous statement Simpson said, which is in quotes is: "It can run up to \$50,000 for the equipment to duplicate the keys for cars." This was an ill-informed comment, but not damaging to the locksmith. You must remember that this story was in *The New York Times*. Readers of the Times don't care how much you have to invest in equipment, they just want to know if you can do the work. Those readers came away with the impression that you can't. That's damaging.

That aside, my main question in all this is why Simpson didn't see this as a tremendous public relations opportunity, and seize the moment to promote locksmiths to a few million people?

I called Simpson for his comments and presented him with that very question. This is his response:

*"As ALOA's president, I am in a unique position to serve our membership through various media, and through all of the opportunities I have to network with various people in our industry. I have done a great job of promoting ALOA so*

*far, and I intend to do even better in the future. But with regards to the NY Times article, and your thought that I missed an opportunity to promote ALOA in that article, I would like to clarify what really happened.*

*I spoke with someone recently who took my comments and published them in The New York Times, in an article that included a report on how expensive it is to compete in today's automotive locksmithing industry. I have only a vague recollection of that conversation, as the NY Times reporter never identified himself as such; instead, he spoke with me as if he was a customer, and for that reason, I answered him as I do all my customers & as a shop owner, and not as the ALOA president. Unfortunately, the story that appeared in The New York Times had some inaccuracies, many of them regarding my comments, several of which I never said, all of which were taken out of context. I gave no statements as the ALOA president to The New York Times, and in fact never even had the chance. I would liken the situation to being challenged to hit a bull's-eye blindfolded.*

*There are two things I do remember saying to the person who turned out to be a NY Times reporter. One was that I no longer do automotive work in my own locksmith business. The second is that I remember saying that the automotive locksmithing market is becoming specialized.*

*A full twenty percent of the classes ALOA offered last year covered all aspects of automotive locksmithing work, and in addition, there was at least one technical article in every issue of Keynotes that dealt with various aspects of the current automotive side of locksmithing. We do our best to not get tricked by crafty reporters, and according to you, sometimes we fail. Did I fail? Did I miss an opportunity? Maybe; it certainly wasn't my intention for my statements to be misconstrued and negatively spun later in The New York Times. My goal is never to put as negative a spin on something as I can; apparently some members of the media don't share that goal with me.*

*My focus is always to work hard for ALOA, to help promote the profession, and all locksmiths in general. To that end, there can be no misunderstanding: Serving members is one area in which ALOA never fails."*

*Positively,  
Randy Simpson, CML*

There was a time when locksmiths were unable to service transponder equipped vehicles and keys. There was also a time when locksmiths were unable to service VATS equipped vehicles. That's no longer the case today, however. With the introduction of Jet's ETD-1 and ETD-1 Jr.; Kaba Ilco's RW2; Auto Security Products TCL-1; HICKOK's NGS; Chrysler D.A.R.T.; Mitsubishi MUT2, and services for Toyota and Lexus, locksmiths can now service most transponder equipped vehicles.

Even with all these units (and you don't need them all), the total investment is not \$50,000, but \$13,485.00. If you're not servicing transponder equipped vehicles, you should be. There's "Gold" in them there transponders, and the tools are available to get it!

TNL

# Letters

*The National Locksmith* is interested in your view. We do reserve the right to edit for clarity and length.

## Going Beyond the Call of Duty...Your Reward Comes When a Child Smiles Back

It's every parent's nightmare - their baby locked inside a car along with the keys, a buzzing bee and you can empathize with one Mohegan Lake mother's predicament. But a good Samaritan in the guise of a locksmith came to her aid, rescuing the 5-month old child from inside a 1998 Mercedes Benz.

The frantic mother called the Mercedes Benz dealership where she bought the car, but got no help. The dealer told her the only way inside would be to break a window, but some Mercedes models come equipped with shatterproof windows to deter carjacking. Police then called for locksmith Leland Imm, owner of Reasonable Locksmithing in Montrose, New York who also serves as a volunteer firefighter.

Imm said he charges a minimal fee or nothing at all for services when children are locked inside a car, even if the parent insists. Imm

tells them to donate the money to their church. "If you give something back to your community, it comes back to you one way or another. And even if it doesn't, you've still done something for someone. Your reward comes when that little child smiles back at you. That's worth a million dollars," Imm said.

Leland Imm  
New York

## Door Doctor Response

Thank you for your Mango's Message editorial on "Door Doctor" in the February issue. I have finally been paid for all the services contracted with Door Doctor for Blockbusters and Circuit City. However, this has been several years ago. I had to continually fight for one ticket to get paid. After several months it paid off, though it was hardly worth it. They were unusually slow to pay.

I try not to do this type of work anymore for unknown out of state companies. However, if I have a slow period and I do not have to lay out \$1000 in expenses, I will usually give a company one chance. I would like to bring attention to a company called "Facility Maintenance Services LLC". I took a chance with this company. I was paid, however, it still took more than 60 days to receive a payment. They say they pay within 30-37 days of receipt of the invoice. I usually mail the invoices the same day or by the next day, and this invoice was also faxed to them the same day. I suppose it was quarantined with some important government mail.

I know there are probably legitimate contract businesses out there that pay on time. However,



this company has similar documents and policies to Door Doctor. They also contract for HVAC, plumbing, and electrical service.

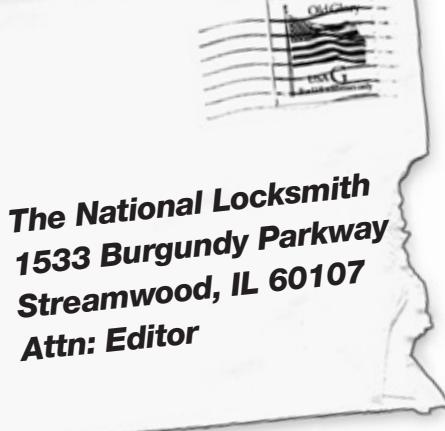
Has anyone else had experience with Facility Maintenance Services LLC? Their address is: 301 Industrial Lane, Avondale, PA. 19311. Phone: 800-754-1195, (601) 268-1560; Fax: (610) 268 1564 Web: www.facilityaintservices.com. I would be interested to hear how others feel about doing business with this company.

Thank you again for bringing attention to the Door Doctor debacle.

T. Hopkins  
Tennessee

## Wrong Number

In the February Beginners Corner column on "Key Blanks," we inadvertently printed Jet Hardware's fax number as a contact number instead of the phone number. The phone number for Jet Hardware is: (718) 257-9600. Give them a call for your key blank needs or to receive their catalog.



# Security Café

**DROP IN FOR  
TOOLS, TECHNOLOGY  
& EQUIPMENT**

## Lund Dual Lock Key Cabinet



This Lund dual lock key cabinet requires the presence of two key holders to open it, providing the extra security needed for high security hospital, medical or pharmaceutical applications. The cabinet may be installed on a wall or may be portable. Capacities can be as large as 2280 key hooks in a floor cabinet or 3400 key hooks in a four drawer key cabinet.

The Lund Key Cabinets are made from 18-gauge steel, with electrically welded construction and come in either light gray or sand color. Doors have dual locks, but can be ordered with single key or combination locks. Index pockets on the doors are extra.

Lund offers more than 70 styles of key cabinets and panels.

## Yale Security Group SecureX



SecureX is an electromechanical delayed-egress exit device used to secure interior or exterior openings. When armed, it delays egress for 15 or 30 seconds upon

depression of a push pad. Once the delay cycle is timed out, the device releases for egress; however, it remains armed to sound an alarm until reset.

SecureX is the next step in the evolution of Yale's 7100/7200 Exit Device series. The product is ideally suited for a variety of commercial applications and government buildings, allowing a delayed exit during emergencies or immediate exit during fire evacuation.

## Alarm Controls Corporation



Alarm Controls Corporation has a new "Request To Exit Station," which meets the Boca Code for access controlled exit doors.

The Request To Exit station has a set of 30-second S.P.D.T. timed contacts, rated 2 Amp @ 35 VDC or 120 VAC and a set of S.P.D.T. momentary contacts, rated 10 Amp @ 35 VDC or 120 VAC.

The Switch is mounted on a standard stainless steel single gang wall plate; the assembly has color-coded leads for wiring. All components are UL approved and CSA certified.



## Videx CyberLock™ Switch Lock

The unique design of all CyberLock cylinders allows you to transform a standard mechanical lock into a full-functioning access control system. With CyberLocks you can restrict access for authorized users to specific days and for specific times during those days. In addition, a record is made each time someone gains entry and each time entry is denied, providing a precise record of who, what, when, and where for management review.

The on/off version of the CyberLock switch lock operates with two home positions. One home position can be set for on and the other home position, located at 90 degrees clockwise rotation, can be set for off. At either of the home positions, the key can be inserted and removed. This version of the switch lock is ideal for control panels, access to electronic security systems, and elevators.

## Ilco Unican's Universal Cylinders



The 1500 Universal Combination Cylinders by Ilco takes flexibility to the max! A tailpiece assortment is included standard with every 1599 cylinder and enables this knob/converta cylinder to be used as a key in knob, key in lever, single deadbolt or double deadbolt cylinder. The screw-on cap

plug/tailpiece retainer insures ease of tailpiece installation and durability.

The versatile 1599 Cylinders are available in over thirty of the most popular keyways and fit many different applications. All 1599 Cylinders feature the strongest, best designed tailpieces in the replacement cylinder market, able to withstand up to 70 inch pounds of force. These high quality cylinders are Master Key and Grand Master Key compatible into OEM Systems.

## Master Lock Safety Lockout Padlocks

Customizing your safety lockout system to your facility's particular needs

**Continued on page 14**

## SECURITY CAFÉ

**Continued from page 12**



**CIRCLE NUMBER  
286**

### **Master Lock**

helps ensure employees automatically and correctly lock out hazardous energy every time. Master Lock helps simplify the task of implementing and maintaining an effective lockout system by offering a variety of customization options.

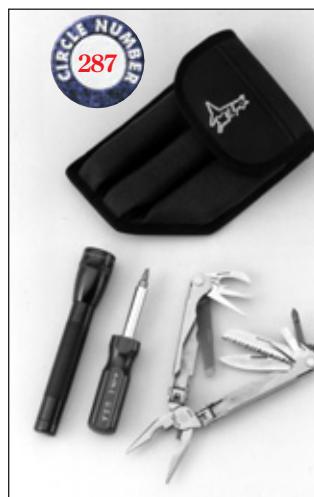
Solid body aluminum padlocks are available in six vibrant colors, and lightweight Xeno Y thermoplastic padlocks are available in eight bright colors to allow color-coding by department, plant or job level.

Master Lock padlocks can be customized with laser engraving on the front and sides of the padlocks with the company name, logo, employee name, key number, and other information. Padlocks can also be customized with adhesive 'Danger' labels that accept employee photo, employee clock number or key number.

### **Jensen's Multi-Tool Kit**

Jensen Tools Multi-Tool Kit includes the versatile SOG Paratool, the Mini Maglite and a miniature 4-in-1 screwdriver, in a sturdy Cordura Plus three-pocket pouch with a handy belt loop.

The star of this kit is the Paratool, featuring needle nose pliers, 3" straight point blade, 3" serrated sheep foot blade, 3 flathead and



**CIRCLE NUMBER  
287**

1 Phillips screwdrivers, can/bottle opener, awl, file (fine, coarse edge cut), thumb tab/lanyard hole and measuring scale. Length open is 6.4", closed 4".

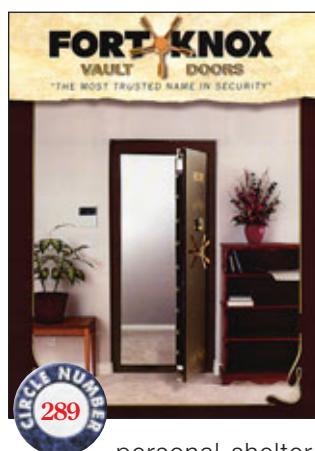
### **Micro Cabinet Lock**

**CIRCLE NUMBER  
288**

The new SDC 290 Micro Cabinet Lock is designed to secure drawers and cabinets. Keys are eliminated, while the addition of a keypad or remote control provides convenient access control. Electronically secure pharmaceutical, gun, file and utility cabinets or retail and museum display cases. The cabinet lock has vertical and horizontal alignments. It is non-handed, omni directional, fail secure and reversible for fail-safe operation. Available in low current, 12 or 24 VDC, applications include drawers or cabinets and display cases with swinging or sliding doors.

### **Fort Knox Vault Door In-Swing**

Fort Knox has developed the Vault Door In-Swing. With an inside release mechanism, the inside swing vault door will allow the door to open even if debris has fallen in front of the door. This will allow the vault to be used as a



**CIRCLE NUMBER  
289**

personal shelter in addition to securing your valuables. It is designed for easy installation for a walk-in security room.

The massive 1-1/8 inch, fire protected reinforced steel door can be set in a pre-formed concrete or cement block opening. The rack & pinion, multi-gear drive-locking mechanism incorporates a 5 to 1 reduction to insure a smooth, positive and virtually maintenance free lock up. Available in eight luxurious colors and backed by a lifetime warranty.

### **Marks USA Key-In-Lever Locksets**

**CIRCLE NUMBER  
290**



ANSI grade 1 and 2 Survivor series, key-in-lever cylindrical locksets, in two distinctive lever designs are now available from Marks USA. The "American" design with an angular return, and the "Crescent" with a smooth rounded lever, both returning to within 1/2" of the door surface.

Both designs feature the "Clutch" mechanism, which prevents forced entry and damage to the lock by disengaging the lever from

the lock before damage can occur. Marks locksets feature a lifetime mechanical warranty. All Survivor locksets are UL Listed for 3-hour fire rating and satisfy all ADA requirements.

### **IEI Door\*Gard Intelligent Lockset**

**CIRCLE NUMBER  
271**

The Door\*Gard LS-1 combines IEI keypad technology, with a rugged Grade 1 lockset, to form the perfect indoor/outdoor system that is as durable as it is attractive. Plus, it's easy to install, with no hard wiring and features all the functionality and the same programming you'd expect from IEI.

The durable alpha-numeric metal Braille keypad has 120 users, with a code length of 1 to 6 digits for over 1 million possible combinations. The Door\*Gard LS-1 is powered by four standard AA batteries that provide up to 150,000 uses. It also features a two stage low battery alert to assure entry.

It is available in conventional Cylinder and Interchangeable (IC) Core versions. Cylindrical, mortise, and tubular locksets are offered as well as four standard trim designs. The Door\*Gard LS-1 is UL listed, as well as ANSI and ADA compliant.

### **Motive Service & Supply**

**CIRCLE NUMBER  
272**

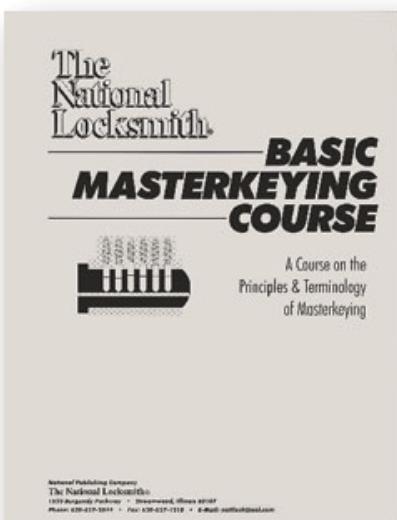


Motive Service and Supply has an all-new Black Max Series Spare Tire

**Continued on page 16**

S E C U R I T Y   C A F É

# Basic Masterkeying Course



13 Lesson  
450 page course

The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

[CLICK HERE TO LEARN MORE](#)

#MK - 1

**Continued from page 14**

Winchlock for pickup trucks and SUV's. This modular designed lock produces two distinctly different maximum-security spare tire locks. A bar type Winchlock for most applications and a universal cable type Winchlock for all applications featuring a 5/8" solid wire core - vinyl coated with one end attached permanently to the lock.

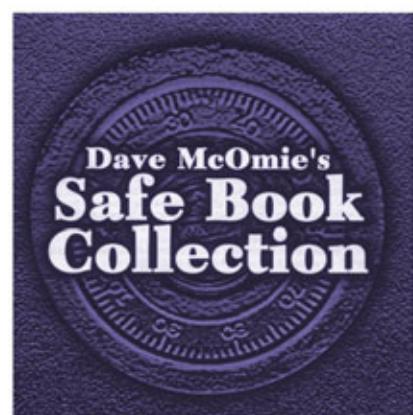
## SDC EMLocks



All SDC electro-magnetic locks now comply with positive pressure requirements of standard UL 10C and are classified in accordance with UBC (Uniform Building Code) Standard 7, Section 2, "Fire Test of Door Assemblies" designed to increase protection of life and property in a fire. The Emlock design also eliminates the need for unsightly black epoxy and potential for toxic fumes in a fire. SDC Emlock's are Listed in UL categories Auxiliary Locks and Burglary Resistant Electrically Operated Locks. Available in 1650 lbs, 1200 lbs, and 650 lbs holding force SDC. Emlocks are BHMA certified as meeting ANSI holding force requirements.

TNL

## Dave McOmie Safe Book Collection on CD



This CD contains every book Dave has ever published.

[CLICK HERE TO LEARN MORE](#)

#DMCD - 1

# The SmartLock Online Controller

*from Cansec*

By  
**Richard  
Allen  
Dickey**



**F**ounded in 1987, Cansec is headquartered in Mississauga, Ontario, Canada. Cansec is a privately owned Canadian corporation, specializing in the design and manufacture of Access Control and Monitoring Systems. Note that I said systems, not just pieces and parts. They have been designing complete systems for 15 years.

On June 20, 2000, Cansec announced the addition of its SmartLock Online Access Control System. SmartLock Online is available in complete single door, iButton™ (Dallas chip) or Proximity packages. Each package includes a reader and a door controller.

Each SmartLock Online controller is equipped with outputs to power an electric lock, as well as control a power door operator. Inputs are provided for a Request-to-Exit Button, a Handicap Access Button and a Door Contact.

When the Door Contact Input is connected, the reader will automatically relock the door once it closes. In addition, an audible alert can be generated if the door is held open longer than a specified amount of time.

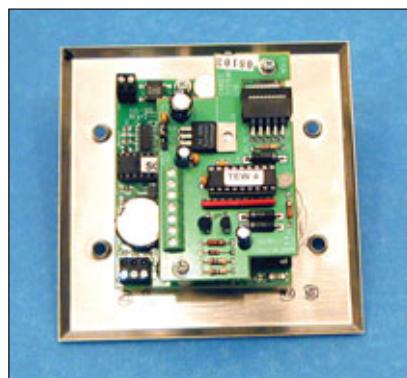
The Wiegand (pronounced weegand) compatible controller can also be purchased separately and supports industry standard Wiegand formats. This means that you can use your favorite manufacturers (Wiegand compatible) reader with the SmartLock Online door controller.

Here is a money saving feature. The software for the SmartLock Online door controller is free. It is designed with all the basic functionality required for most installations and is capable of controlling 30 doors and 4800 cardholders. Did you catch that free part?

If any of this catches your interest, I have included a complete list of features and specifications at the end of the article. For those like me that like pictures, the fun starts now.

I got the Wiegand version to review. The model number is "CA-SOW". The controller mounts in a standard double gang electrical box. (See photograph 1.) Each controller is designed to work with only one door, but you can have as many as 30 controllers at any one site.

The controllers are linked together with a standard, shielded, single twisted pair. This same cable



**1. The SmartLock Online Access Control System can be mounted in a standard double gang electrical box.**

can continue to other controllers if more than one is used. The maximum distance for the cable is 2000 feet. That's a long way! How can it work over such a long distance? They use a line driver.

The line driver is the little black box that connects the computer to the controllers. I removed the cover just to give you a peak inside. (See photograph 2.)

There are two external connections on the line driver. (See photograph 3.) The three screw down terminals are attached to the single pair wire that runs to the controller. The other connection is a standard 9 pin "D" connector that connects to the computers serial port.

The controller can be powered by 12 VDC or 12 to 16.5 VAC. Your



**2. The computer talks to the controller through a line driver.**

power choice will depend on the type of lock and reader that you use in your installation.

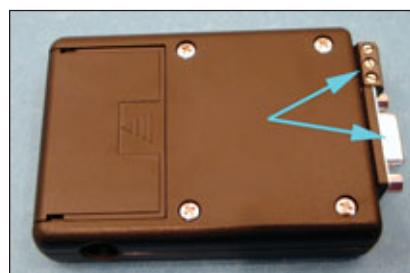
I really like the connectors on the door controller. They are screw down connectors that slide onto pins on the controller circuit board. (*See photograph 4.*) The really nice thing about the connectors is the ability to quickly replace a controller if needed. It also makes it easy to connect wires if the connection is in a tight location, like under another circuit board. (*See photographs 5.*)

A typical reader for a system like this, could be the HID 6005 proximity reader. (*See photograph 6.*) The HID 6005 uses the industry standard Wiegand format and is completely sealed to prevent water intrusion.

To go along with the Proximity reader, you will need a few Prox cards. The cards are considered passive because they do not use a battery. When you take one apart, you can see a coil of wire and a small microchip inside. (*See photograph 7.*) It's just amazing what you can do with electronics!

The reader is connected to the controller with seven wires. (*See photograph 8.*) Two are for power, two are for data transfer and the other three are for LED's and a buzzer. When are we going to get to the computer part? Right now!

The SmartLock Online system is controlled by a computer. I have worked with computers since they first came out in the early 80's. Anyone heard of the "build it yourself" Zenith computer? I didn't think so. Anyway, I have had my bad days, but like them or not, they are here to stay. In case you are curious, I like them a lot!



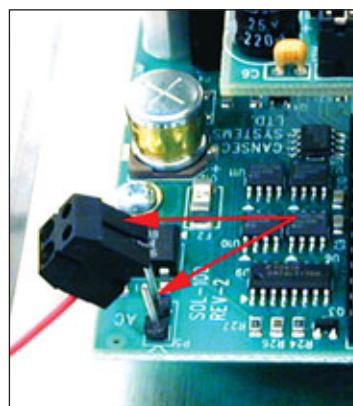
**3. There are two connections on the line driver. One is a 9 pin "D" connector that connects to the computer. The other is a screw down terminal to connect the single, shielded, twisted pair cable that runs to the controller.**

The free software that comes with the SmartLock system has all of the most common features you would expect. It comes on two floppy disks and is very easy to install.

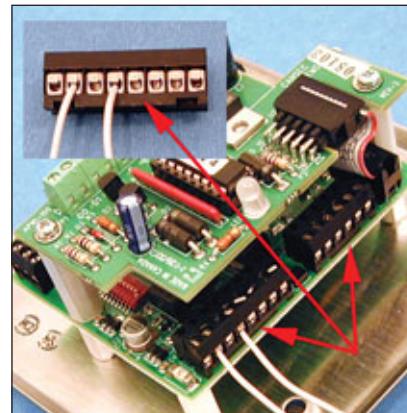
When the program is run, you will see a window that starts with a site view. (*See photograph 9.*) By selecting an icon on the left of the window or by using the "view" pull down menu, you can look at all of the other views that are available. (*See photograph 10.*)

The reader view will list all of the door controllers at the site. By selecting an option from the list across the upper portion of the window, you can add new controllers, edit existing ones or remotely lock or unlock a door. (*See photograph 11.*)

The way the system can tell one controller from another is through an identification number. The number is entered in an address box, in the reader description window. (*See photograph 12.*) How do you know what number to put there? Well there is a little switch pack located close to the battery on the controller circuit



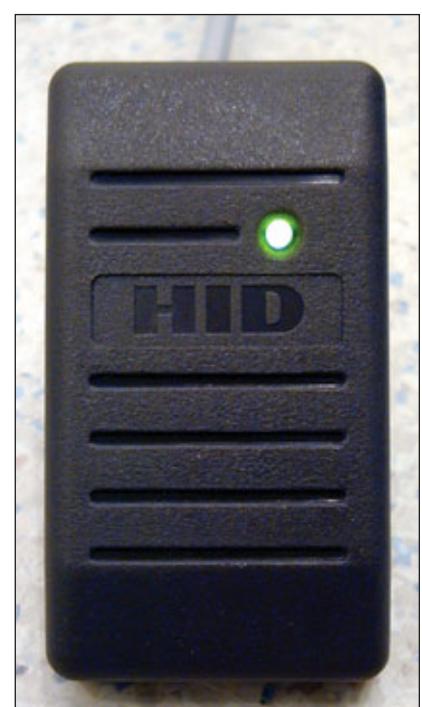
**4. The connectors are a nice screw down type that slide over posts found on the circuit board.**



**5. These connectors make it easy to use in hard to reach places.**

board. (*See photograph 13.*) The instructions with the controller tell you how to set the switches for numbers 1 to 30. In this case the switches are set to "1".

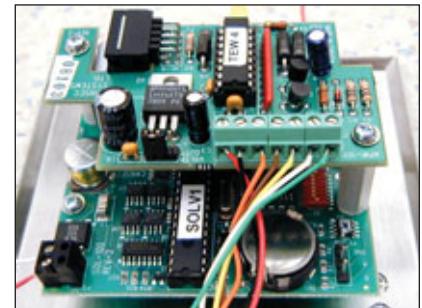
The unlock view will allow you to set up to 60 unlock schedules per



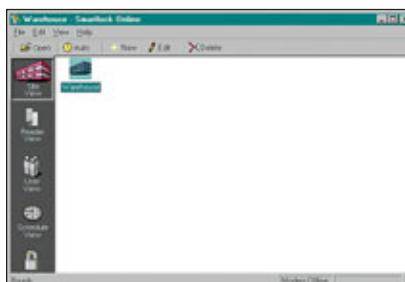
**6. The HID 6005 Proximity reader works great with this system.**



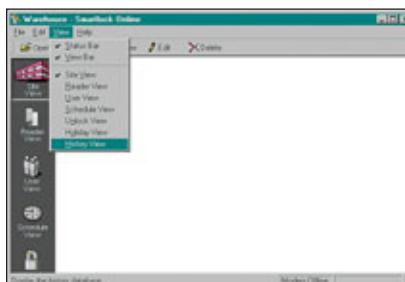
**7. Here is a prox card that goes with the HID reader. Notice the coil of wire inside that acts as an antenna.**



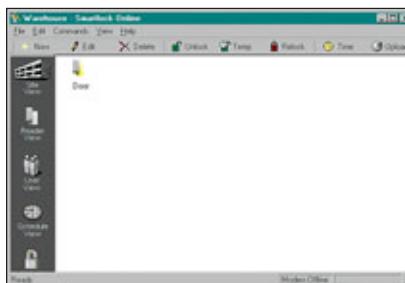
**8. The reader is connected to the controller by seven wires.**



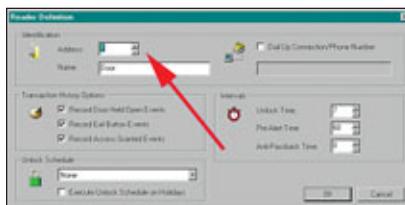
**9. The first window to appear when the software is run is the site view.**



**10. Different views are accessed either by selecting a view icon on the left side of the window or by using the "view" pull down menu.**



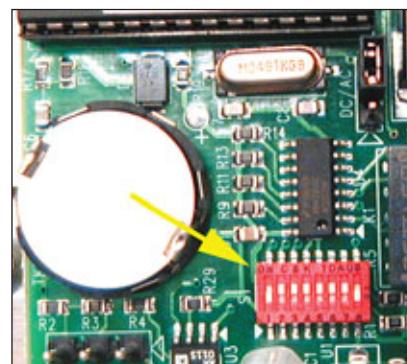
**11. Reader information is accessed from the reader view window.**



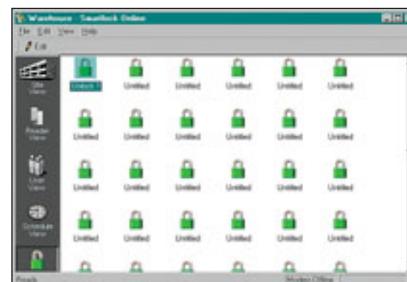
**12. Each reader is connected to a separate controller. The controller identification number is entered in the address box under the reader identification window.**

site. (See photograph 14.) The unlock schedule will tell a door when to automatically lock and unlock. The times are set in the unlock schedule. (See photograph 15.)

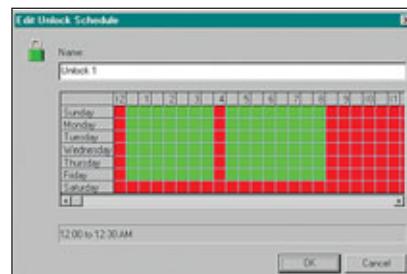
The user view will allow you to set specific information in the system for each user. (See photograph 16.) When you edit a user, you can



**13. The address for the controller is found by reading the switch positions on the controller circuit board.**



**14. The unlock view will allow you to set up to 60 unlock schedules per site.**

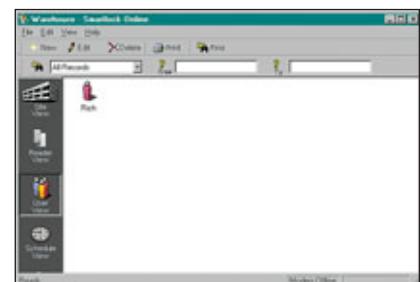


**15. To set the unlock times, just edit the unlock schedule.**

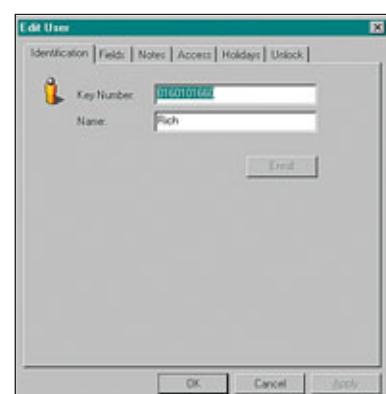
change the name and also assign a prox card. (See photograph 17.) The numbers are stamped on the prox card and consist of a total of 10 numbers. Other information like notes, unlock and access schedules, can be viewed or edited. (See photograph 18.)

My favorite is the history view. In this view you will be able to see a history of what has happened at each controller. (See photograph 19.) The date, time, user name, card number and more will be displayed. Up to 1000 events can be stored in the controller. After 1000 events, the oldest is overwritten. These events can be uploaded to the computer for viewing or to be saved as a history file.

Did I mention the cost of this



**16. The user view is where you can store up to 4800 users.**



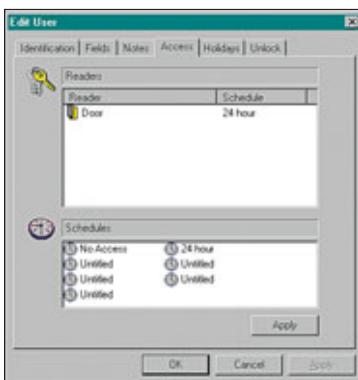
**17. When adding a user, the user name and a 10 digit key identification numbers is entered.**

system? It is impressive. The controller with a proximity reader is \$257.00 to the locksmith. If you only want the controller it is \$197.00 to the locksmith. The line driver is \$64.00 and the software is free. I can see a lot of opportunities here.

Here are the specifications I promised in the beginning of the article. There is some good information to review if you have a customer that is looking for an access control system and doesn't want to spend a lot of money.

#### SmartLock Online features:

- Simple to Install and Operate
- Unlimited Number of Sites
- Up to 30 Card Readers per Site
- Up to 4800 Cardholders per Site
- Software for Windows® 95/98/NT/2000
- Remote Site Dial-Up Capability
- Timed Anti-Passback Feature # (1-255 Minutes)
- Handicap Door Operator Output
- Automatic Door Unlock Schedules
- iButton™ and Proximity Versions
- Some of the specifications for the door controller include:
  - Reader Type: iButton™ and Wiegand

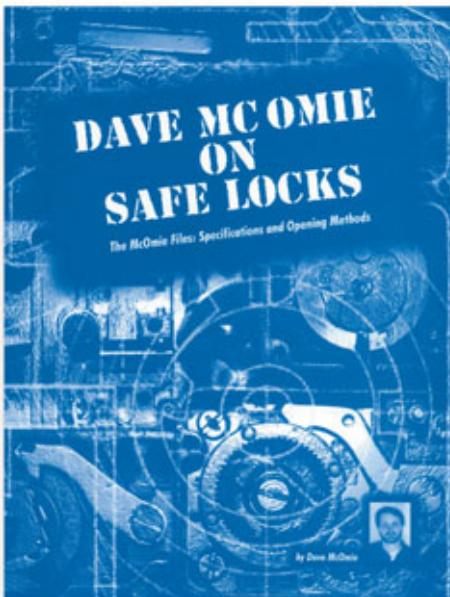


**18. Other information like notes, unlock and access schedules can be viewed or edited.**

Date	Time	Event	User	Location
February 18, 2002	14:28:38	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:40	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:41	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:42	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:43	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:44	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:45	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:46	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:47	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:48	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:49	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:50	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:51	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:52	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:53	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:54	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:55	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:56	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:57	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:58	Access Granted	Rack	0180101000 Door
February 18, 2002	14:28:59	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:00	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:01	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:02	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:03	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:04	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:05	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:06	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:07	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:08	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:09	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:10	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:11	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:12	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:13	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:14	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:15	Access Granted	Rack	0180101000 Door
February 18, 2002	14:29:16	Door Held Open-Alarm	Unknown	0180101000 Door
February 18, 2002	14:29:17	Door Held Open-Door Remote	Rack	0180101000 Door
February 18, 2002	17:18:16	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:36	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:37	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:38	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:39	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:40	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:41	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:42	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:43	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:44	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:45	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:46	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:47	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:48	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:49	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:50	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:51	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:52	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:53	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:54	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:55	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:56	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:57	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:58	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:59	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	17:18:59	Door Released By Remote	Rack	0180101000 Door
February 18, 2002	21:28:42	Access Granted	Rack	0180101000 Door
February 18, 2002	21:28:43	Access Granted	Rack	0180101000 Door

**19. The history report can be viewed and saved after it is uploaded from the controller to the computer.**

# Dave McOmie on Safe Locks



Almost 300 pages of information, photographs and illustrations give you every scrap of information about a huge variety of safe locks.

**CLICK HERE TO LEARN MORE**

#DMSL - 1

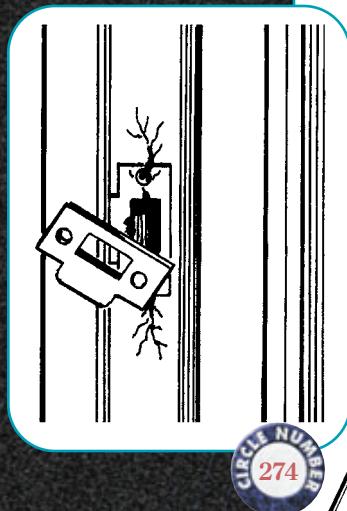
- Warranty: one year (Cansec manufactured parts)
  - Card/Key Warranty:
  - iButton™ \* lifetime, normal wear
  - Proximity/Wiegand varies by manufacturer
  - Communications: RS-485, single pair, stranded, twisted overall shield, 18-20 AWG, 2000 ft. max.
  - Lock Output:
  - iButtonTM open collector, 12VDC @ 250 mA supplied
  - Proximity \* some readers may require 12 VDC supply
  - Door Operator Output: dry contact, normally open, 250 mA @ 24VDC
  - Handicap Button Input: normally open, momentary closure
  - Exit Button Input: normally open, momentary closure
  - Door Contact Input: normally closed
  - Bi-Color LED: standard
  - Beeper: standard
  - Operating Temp: -40C to 70C (-40F to 158F)
  - Environment: Indoor/Outdoor
  - Supply Voltage: 12VAC, 20VA or 12VDC, 1A (depends on lock and readers used)
  - Software features:
    - Operating System: Windows™ 95/98/ME/NT/2000
    - Controller Capacity: 30 single reader controllers
    - Cardholder Capacity: 4800
    - Access Schedules: 6 User Programmable
    - Unlock Schedules: 60 User Programmable
    - Timed Anti-Passback: 1 to 255 minutes
    - Holidays: 60
    - Commands: Unlock, Momentary Unlock, Upload, Download
- I hope you enjoyed this inside look at the SmartLock online access control system from Cansec. See you next time and have a nice day!
- For more information about this system or one of their many others, contact: Cansec Systems Ltd. 3105 Unity Drive, Unit #9, Mississauga, Ontario, Canada, L5L 4L2. Phone: (905) 820-2404; Fax: (905) 820-0301. Web: <http://www.cansec.com>.*

TNL

# DOOR HARDWARE

## MAJOR JAMB JACKET

Imagine if you will, trying to play a baseball game without bats, or perhaps fishing without a lure or hook. Seems silly, doesn't it? It's like the expression: "The sum is the whole of its parts." Quite simply, certain activities rely on specific equipment. The same holds true for installing security devices in a doorway. The counterpart to any good door-locking mechanism is the jamb of the door itself. It's a simple component to a door that is often



overlooked. Customers spend a lot of money to have state-of-the-art locks installed on their doors, but if the integrity of that jamb is compromised, then that lock becomes nothing more than an expensive ornament, because there's nothing to stand in between the intruders and the valuable items on the other side of that door.

Whether the doorjamb has been damaged by an attempted break-in, or just simply due to someone's carelessness with heavy equipment crashing into the frame, Major Manufacturing's Jamb Jacket truly is the minimal cost solution. The Jamb-Jacket installs within minutes and gives a professional look to any job. And they're cost-effective too. Keep a few on hand in the service vehicle for any time an emergency situation arises and your customer needs a repair done in a hurry. The Jamb Jacket is the perfect and swift answer for repairing and reinforcing any doorjamb, be it damaged or not. Jamb Jackets not only save from the expense of having to replace an entire doorjamb that has been damaged, but it also aids in the strengthening and reinforcement of an undamaged jamb as well.

## SARGENT INTEGRATION

A question every business owner should be asking himself or herself: "What is at risk? Property? Business Strategy? Computer software / data? Employee safety?" Each of these is a good reason for access control within a business.

At SARGENT, we are serious about "Leading the Trend toward Higher Security." S A R G E N T has introduced their third generation of stand-



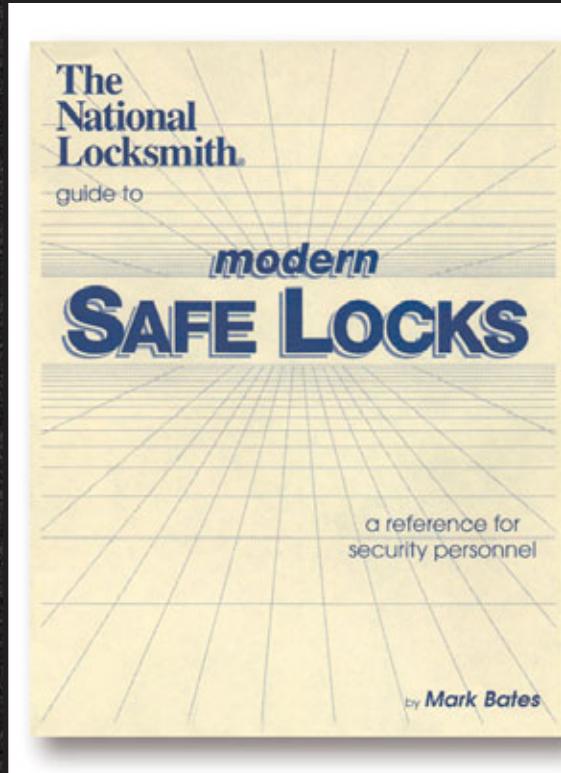
alone access-control locks, using keypad/computer technology to determine authorized access. SARGENT makes an important leap in access-control by combining HID proximity-card technology with SARGENT'S keypad lock technology and Softlink Plus Software. This allows the business owner to integrate prox-technology without hardwiring an electric lock or strike.

The SARGENT prox-lock can operate as prox only, or also requiring a pin code to be entered on the keypad, increasing the level of security. Using prox-cards or a "fob" allows for easy integration into a business owner's existing HID prox-system, or provides a great platform for a new system. The lock allows up to 500 users and stores the last 1,000 operations in memory. When interrogated, it can provide detailed information of these operations. Each lock contains a "real time" clock with the date, allowing for eight different time zones, 16 different holidays, and sustained mode capability.

Programming is accomplished using Softlink Plus and a computer or a hand-held data transfer unit. All of this is in the new "Low Profile" design that is stylish and versatile (covers existing preps). As a "full line" manufacturer of finish hardware, SARGENT offers this technology in a heavy-duty cylindrical lock, mortise lock and rim/mortise panic devices.

#### **SECURITY DOOR CONTROLS EMLOCK®**

SDC manufactures a complete line of premium grade Emlock's to meet a variety of access control



## **Modern Safe Locks**

You always wanted to make  
money servicing safes?

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installation requirements. Choice of holding force includes: 1650 lbs., ANSI Grade 1; 1200 lbs., ANSI Grade 2; and 650 lbs., ANSI Grade 3. A small 300 lb. magnet is available for drawers, display cases and cabinets.

The electromagnetic core utilizes an advanced patented metal fusion "U" channel design, which fully stabilizes the EmLock mechanically and magnetically. The need for unsightly black epoxy is not required, providing a superior aesthetic appearance and eliminating the potential for toxic fumes in a fire. Furthermore, all EmLocks are completely serviceable and all parts are interchangeable without removing the lock from the frame.

The 1511 series "Quick Mount" assembly consists of an interlocking mounting plate, providing positive attachment of the lock prior to fastening. Both hands are free for securing screws and attaching wires. In addition, the interlocking feature distributes stress evenly the full length of the lock and reduces stress to the lock mounting screws. Mounting integrity is significantly increased.

The patented Micro/Shear and Hi/Shear design features provide the most reliable operation available in a shear lock. SDC electromagnetic shear locks are capable of both vertical and horizontal alignment adjustment. They are equipped with a door alignment and door static sensor with a relock delay timer, preventing activation of the lock until the door is at rest and properly aligned with the lock. The Micro/Shear EmLock can withstand up to 2000 lbs. holding force and the Hi/Shear EmLock is capable of up to 2700 lbs. holding force.

SDC Emlocks are UL Listed as "Auxiliary Locks" and "Burglary Resistant Electric Locking Mechanisms,"



CSFM Listed, MEA Listed. SDC EmLocks comply with "positive pressure" requirements of UL10C and are classified in accordance with UBC standard 7-2, "Fire Test for Door Assemblies." SDC Emlocks are also BHMA certified as meeting ANSI/BHMA Grade 1, Grade 2 and Grade 3 holding force requirements accordingly.

#### STI EXIT STOPPER

The STI Exit Stopper® from Safety Technology International, Inc. of Waterford, Michigan. STI is best known for its Stopper® II unit that has been helping stop false fire alarms around the world for more than two decades.

Completely self-contained, Exit Stopper can be mounted on top, right, left or next to almost any door. When opened, the device sounds a 120 dB warning horn (or softer 85 dB) for 30 seconds, three minutes of continuously (as preset by the user). A key-operated override will silence the alarm and permit authorized exits.

Available in red or green, Exit Stopper has found wide favor in stores, restaurants and such who are required by law to keep their side or back doors open during normal business hours. It's easy to install, much less expensive than heavy bar-type units and offers a wide range of useful features. For example, there can be remote placement of the alarm or it may be programmed for a 15-second entry delay.

Another feature customers seem to appreciate is the stop sign design and the large printed words "STOP...EMERGENCY EXIT ONLY" which serve as a deterrent itself. Also, the user can select on site whether to use the device as an alarm or to annunciate entrances. In the annunciator mode, it announces a door entry with a set of five beeps.

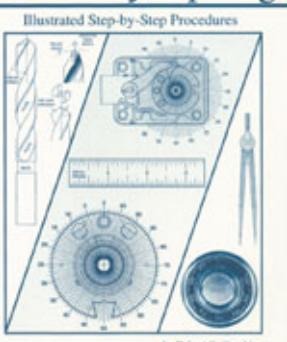
At the request of customers, each device features a low battery warning indicator to protect the long-life alkaline battery that comes with each unit. A separate model is available for protection of double doors.

Applications for the STI Exit Stopper are as wide as there are customers who have emergency, fire or other doors to protect—including special schools. **TNL**

## Modern Safe Opening

**The National Locksmith.**  
Guide to:  
**Modern Safe Opening**

Illustrated Step-by-Step Procedures



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

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#MSO - 1

# Continuous Geared Hinges

by Bob Cronk

**D**o you hear an "Opportunity for Profits," when callers say:

*"Can you come over and fix our doors? The locks won't work, and the hinges are letting our doors sag and drag on the thresholds".*

Medium and high-traffic doors often show wear because the frequent usage and stresses are more than many traditional hinges can handle. A sagging door condition is most commonly caused when the top butt hinge or pivot has started to pull out from the frame. One way to remedy this condition is to install a full-length continuous geared hinge that distributes the door weight and stresses over the full length of the door and frame. The door can usually be salvaged, and the locksmith becomes a hero to the customer. Best of all, this is a *Profit Opportunity* for the savvy locksmith!

Continuous geared hinges are utilized as a hinging system for aluminum, wood, and hollow metal door and frame applications for retrofit and for new construction. This commercial architectural hardware product is being specified more and more for medium-to-high traffic interior and exterior doors. Continuous geared hinges are well suited to keeping entrance components in alignment while withstanding the pressure of many thousands of cycles per year, and in some cases, even thousands per day! High winds also take their toll of door hardware systems.

The continuous geared hinge provides clean, eye-appealing design lines and can be anodized or custom painted to match nearly any exterior design.

Constructed of three interlocking, anodized extrusions (two geared leaves and a cover channel), a continuous geared hinge installs on the full length of the door and frame, uniformly distributing the opening and closing force of the door. The

vertical door loads are carried on a series of either high-tech plastic or steel bearings along the full length of the hinge. Continuous geared hinges can be manufactured in light duty, standard duty, heavy duty, or extra heavy duty versions. The heavy and extra-heavy duty models have additional bearings and fasteners to support added door weight, extra-wide doors, lead-lined doors, or any doorway having unusually frequent traffic.

This full-length design seals the gap between door and frame, offering security, privacy, noise reduction, weatherproofing, and no-finger-pinching features. Continuous geared hinges also reduce or eliminate the recurring problem of wind damage caused to doors by attempts at closing the door while a broomstick or other foreign object has been wedged into the gap between door and frame. The disbursement of opening force along the length of the door also greatly reduces the amount of stress on a door caused by misaligned butt hinges or pivots, which by their nature localize door weight and stress at the upper portion of the door. Most importantly, continuous geared hinges serve to reduce or eliminate door sag.

Continuous geared hinges are installed on the surface of the door and frame. No costly mortising or cutouts are required on either the door or the frame. When the door is closed, most profiles have no exposed screws, bolts, pins or knuckles to be vandalized.

There are three main applications for continuous geared hinges:

#### **Full Surface Mounting**

Full surface continuous geared hinges are installed on the face of a door and frame. This profile is usually used in retrofit situations, but can also be used with new doors and frames. (See illustration



**Full Surface Hinge**

**Illustration A.**

A.) The hinge is installed with 12-24 fasteners in the frame leaf, and fastened with throughbolts and 1/4-20 shoulder screws through the door.

Full surface hinges are also usually designed with four locator holes per hinge to aid in the adjustment of the door to fit plumb and square in the entrance opening before installation of the door and frame fasteners. This profile can be used on aluminum, wood and hollow metal doors up to 2-1/4-inch thick. A common use for full surface hinges is on doors that have sagged due to damage or wear on the original butt hinge or pivot.

#### Half-Surface Mounting

Half-surface continuous geared hinges are installed on the face of a door, with the frame leaf concealed. This profile is usually used in retrofit situations, but can also be used with new doors and frames. (*See illustration B.*) The new door must be undersized by the clearance needed at the lock side of the door, plus 3/16-inch (1/8-inch frame leaf + 1/16-inch clearance = 3/16-inch) on the hinge side. The frame leaf is installed on the rabbet of the frame with 12-24 fasteners, and the door leaf is through-bolted to the door surface with sexnuts and 1/4-20 shoulder screws. This profile can be used on aluminum, wood and hollow metal doors up to 2-1/4-inch thick. A common use for half-surface hinges is on doors that have been weakened at the hinge edge, but the door itself is still serviceable.

#### Concealed Mounting

Instead of being "mortised", the concealed type of continuous geared hinge is simply mounted on the

hinge stile of the door and on the rabbet of the frame. This profile is normally specified for use in new construction, but can also be used with new doors in existing frames. (*See illustration C.*)

A new square-edge door must be undersized by the amount of clearance needed at the lock side, plus 5/16-inch for the hinge (1/8-inch leaf + 1/8-inch leaf + 1/16-inch clearance between leaves = 5/16-inch).

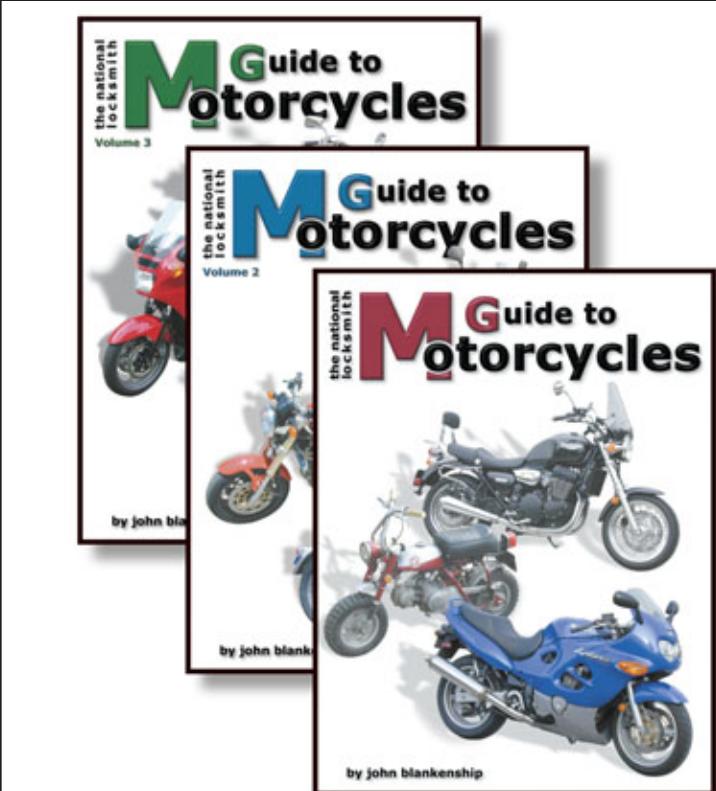
A new bevel-edge door must be undersized by the amount of



**Concealed Hinge**

**Illustration C.**

## Guide to Motorcycles Volumes 1, 2, 3

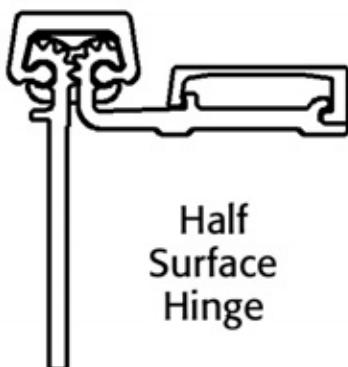


For years locksmiths have begged for a comprehensive service manual on motorcycles and its finally here!

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**Illustration B.**



**Half Surface Hinge**

clearance needed at the lock side, plus 11/32-inch for the hinge (1/8-inch leaf + 1/8-inch leaf + 3/32-inch clearance between leaves = 11/32-inch).

The hinge cap on the profile requires a 7/16-inch rotational clearance at the jamb side. The hinge opens to a full 180 degrees, and is usually designed for either 1-3/4-inch or 2-inch doors. The concealed hinge is engineered to work with a closer having a butt hinge type pivot point. Existing concealed floor or concealed overhead closers having a fixed center pivot point must be replaced with a traditional overhead surface closer.

Concealed continuous geared hinges are normally installed with either 10-24 or 12-24 undercut head, thread-forming fasteners. A pilot hole needs to be drilled, and the fastener then forms its own threads. Some installers use self-drilling fasteners, but they are not recommended for installation in mortar or grout-filled door frames. The drill point in all probability will hit the mortar and create a "jacking effect" on the frame. It is

recommended to first remove the mortar with a masonry bit. If possible with contract work, some form of mortar guard should be specified behind slushed-in frames. Security fasteners, wood screws and other fasteners are also available for certain applications.

#### Evolution

Like many product lines, design improvements have taken place since the concept of continuous geared hinges was first introduced over 25 years ago. Modern continuous geared hinges have templated hole patterns, lubricated bearings, permanent lubricants on the geared areas (which nearly eliminates maintenance needs), extended wear life, non-handed design, 410 stainless steel fasteners, security features, electrical modifications, and decorative hinge caps.

Continuous geared hinges are manufactured in standard industry lengths (79, 83, 85, 95 and 119-inches) that allow for threshold clearance in most openings. Mounted flush with the top of the door and allowing 1/8-inch header

clearance, standard length hinges allow 7/8-inch clearances at the bottom. Hinges can be cut to exact lengths in the field, or at the factory. After cutting, a non-handed new continuous hinge may become handed, depending on the model. Most hinges are finished in 628 Clear anodized aluminum, or Dark Bronze anodized colors. Custom anodizing and custom painting allow the hinges to be matched with other hardware finishes.

A properly installed continuous geared hinge can easily last ten to twenty years or longer in an entrance, and tolerate a great deal of abuse and heavy traffic with little or no maintenance required. Schools, hospitals, public buildings, hotels, airports, sports centers, storefronts and wastewater treatment plants are just a few of the many commercial, governmental and industrial facilities that are specifying continuous geared hinges because they extend the life of the entrance system.

*Bob Cronk is national sales manager for SELECT Products Limited in Portage, MI. TNL*

**The National Locksmith**

Guide To:

## **Motorcycle Lock Service**



by Shirl Schamp

# **Motorcycle Lock Service**

This book contains full details  
on everything the locksmith  
needs to know about  
motorcycle locks.

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#MLS-1

1970



PART Two

BY

MICHAEL  
HYDE



# MERCEDES-BENZ

250

This month we conclude with the trunk lock, glove box lock and specifications.

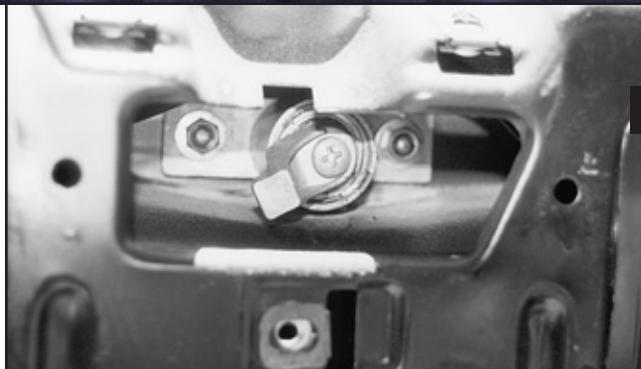
## Trunk Lock



1. The trunk lock is located on the rear body above the license plate. The lock cylinder is mounted in a push button body design.

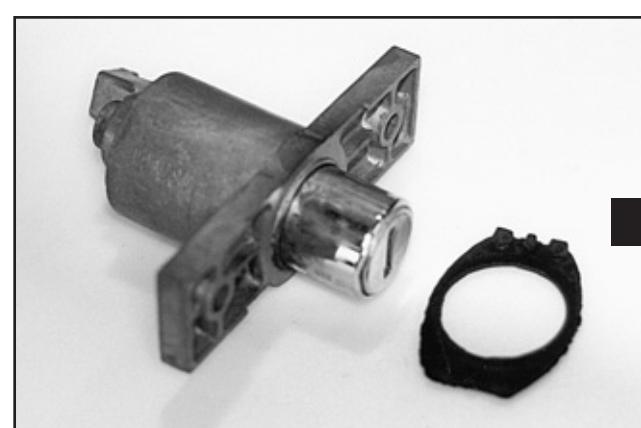


2. To gain access to the trunk lock you will need to remove the latch mechanism. There are three large Phillips head bolts that must be removed.

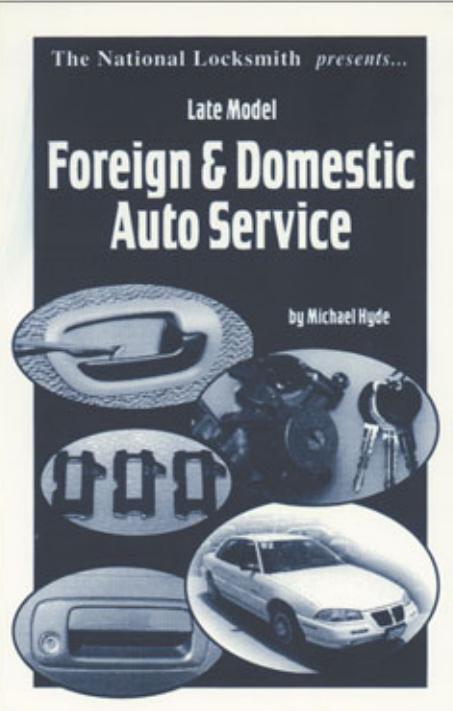


Keep an eye on the chrome trim as you remove the nuts that secure the lock cylinder. It could fall off and get scratched.

3. Once you have removed the latch, you can then see the rear of the lock cylinder. Remove the two 10mm nuts securing the lock cylinder.



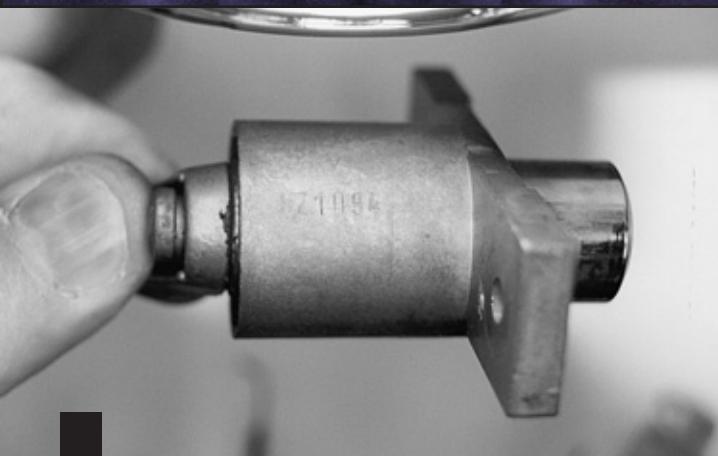
- 4.
5. Here is the lock cylinder removed. There is a rubber gasket that can easily be lost when removing the cylinder.



## Foreign & Domestic Auto Service

This book represents the best work of Automotive Locksmithing guru Michael Hyde, author of the famous AutoSmart.

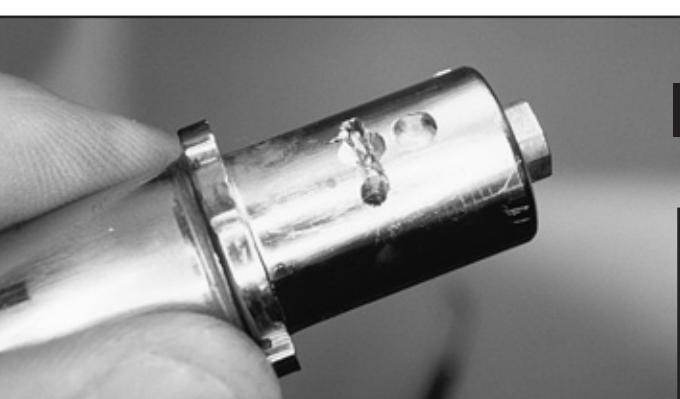
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6. There is a code stamped on the side of the trunk lock housing. The code series for this car is HZ 001-HZ 1200.



8. The trunk lock cylinder is housed in the push-button assembly. There is a retainer ring holding the cylinder in the housing.



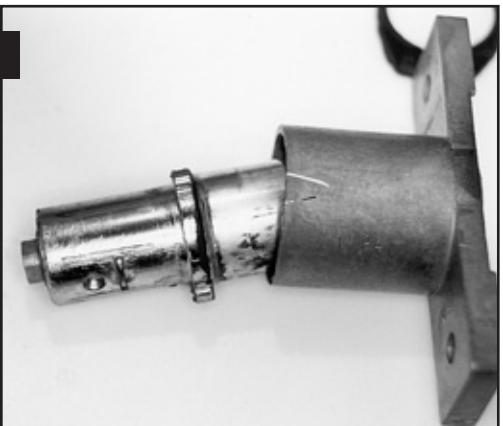
7. To disassemble the trunk lock you must first remove the Phillips head bolt that holds on the tailpiece.



9. Use a small flat bladed screwdriver to wedge out the retainer ring. The body spring and spring washer will then come out.

10.

The trunk lock cylinder will then be able to slide out of the push button housing.



11.

The lock cylinder has a ward in it. You will need to remove the ward keeper. Drill a small hole directly next to the ward keeper and pry it out.

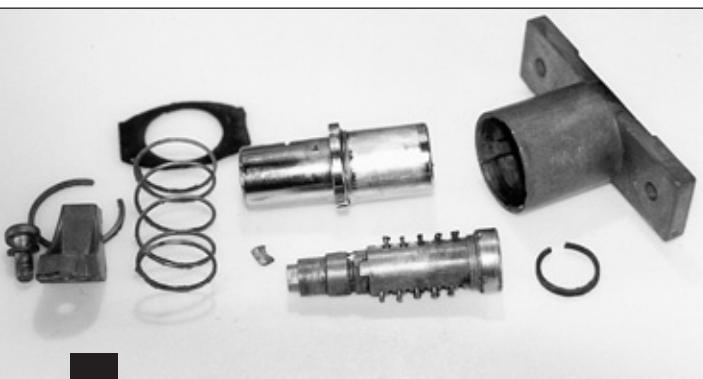




12. The lock cylinder plug will now slide out the front of the cylinder housing.



13. The trunk lock cylinder plug contains 10-tumblers and they are bi-directional.



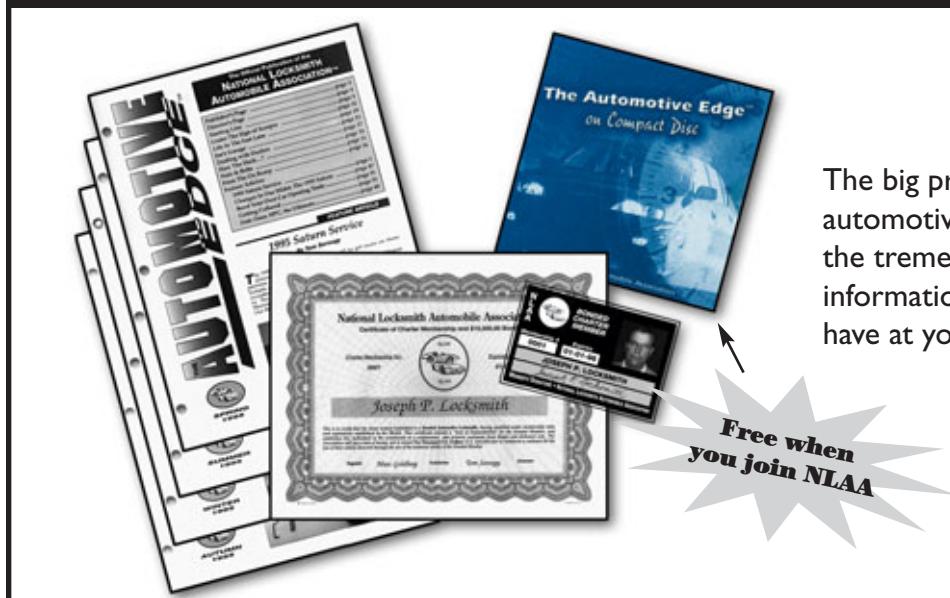
14. Here is a view of the trunk lock cylinder assembly.

### Glove Box Lock



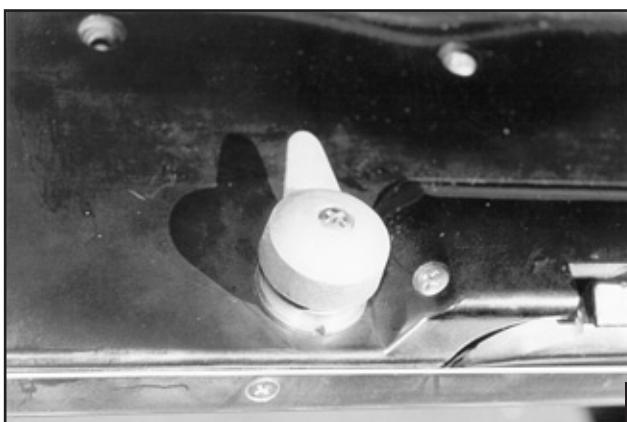
15. The glove box lock is located to the left of the glove box handle.

## NLAA One Year Membership

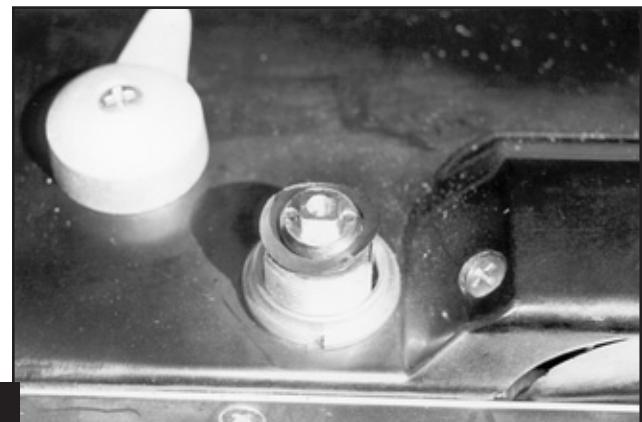


The big problem in automotive locksmithing is the tremendous amount of information you need to have at your fingertips.

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16.



To remove the glove box cylinder, the tailpiece needs to be removed.

Once removed, save the spring washer underneath.



17. There is a code stamped on the side of the glove box lock housing. The code series for this car is HZ 001-HZ 1200.



18. On the back of the lock there is a retainer ring holding the cylinder in the housing, use a small flat bladed screwdriver to wedge out the retainer ring.

*Continued on page 42*

## NSO One Year Membership



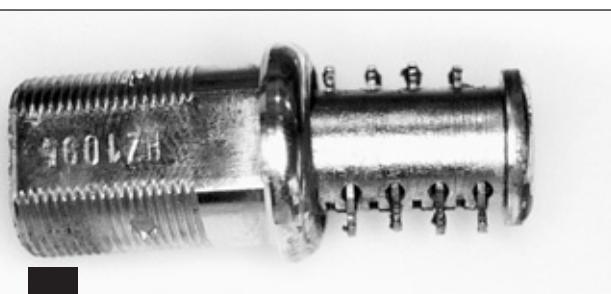
Free when you join NSO

To make big profits in safe work with no hassles...you need information!

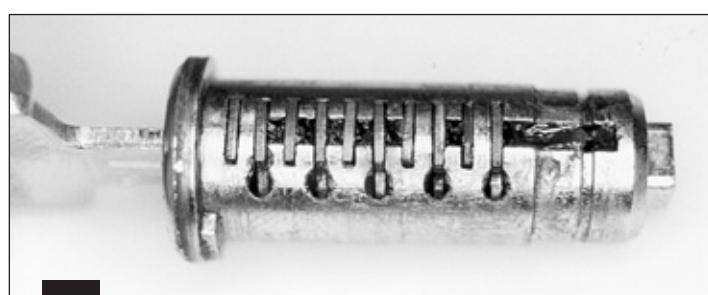
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**Continued from page 39**

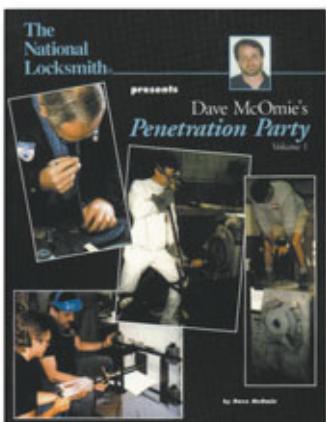


**19.** The plug can now slide out the front.



**20.** The glove box lock cylinder plug contains 10-tumblers and they are bi-directional.

## Penetration Party



- Uncensored!
- The Safes!
- The Tools!
- The Action!
- The Perfect Openings!
- The Bloopers & Blunders!
- The Slick Tricks!

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#PP - 1



## Making First Key

### **Method #1**

Check owner's manual for code, written in by the dealer.

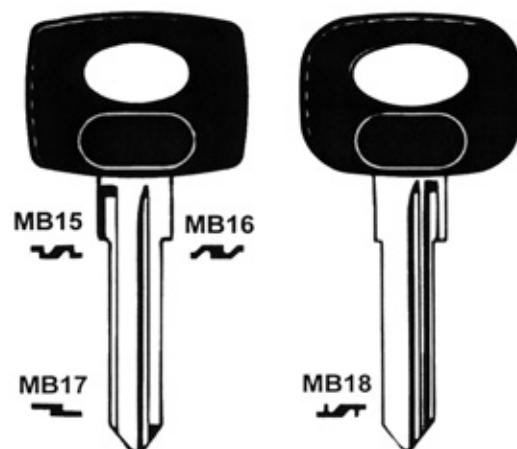
### **Method #2**

Remove the glove box lock and read the code on the side of the lock and make a master key from that.

### **Method #3**

Remove the screw on the edge of the door that holds the door handle/lock cylinder in place. Push the handle assemble towards the front of the car and then remove it.

There should be a code stamped on the door handle, if there is no code then disassemble the lock and decode the available wafers and make a working key. Some door cylinders are missing tumblers in positions 1 & 2. If there are missing cuts, then progression or impression the missing cuts in the trunk or ignition. There are special tumblers in the trunk, to block out the valet, make sure you're using the correct blank to the car you are working on. Otherwise you will have a key that works the doors and ignition, but for some reason it doesn't work the trunk.



### **CODE SERIES: HZ/NZ 1-1200**

#### **DEPTHES**

- 1 = .284
- 2 = .264
- 3 = .244
- 4 = .224

#### **Reed Codes:**

5-02-188, 5-02-201

#### **HPC 1200 CM:**

CF30, XF30

#### **Curtis Clipper:**

N/A

#### **ITL MFG:**

303

#### **Pak-A-Punch:**

N/A

#### **M.A.C.S.:**

2

#### **Cut to Cut: .090**

#### **SPACING**

- 1 = .105 (bow)
- 2 = .195
- 3 = .285
- 4 = .375
- 5 = .465
- 6 = .555
- 7 = .645
- 8 = .735
- 9 = .825
- 10 = .915
- 11 = - (tip)

#### **Key Blanks:**

**ILCO: M79T, MB15 SILCA:**

**HU22**

**Jet: MB16-NP**

**TNL**

# Quick Entry UPDATE

by  
Steve  
Young



TECH TRAIN PRODUCTIONS

## 2002 CHEVROLET AVALANCHE & CADILLAC ESCALADE EXT

The 2002 Chevrolet Avalanche and Cadillac Escalade EXT are being advertised as a completely new kind of vehicle. (*See photograph 1.*) By the use of several clever sliding panels and fold-down seats, they can be converted from a pick-up truck to an SUV in a matter of seconds. However, one thing about these trucks is not new - the door. The doors on both the Avalanche and the Escalade EXT are virtually identical to those found on all of the other GM Sport Utility Vehicles made after 2000, and pick-up trucks made from 1999 and up. The same unlocking methods that work on the Avalanche will also work on the Chevrolet Tahoe, Suburban and Silverado, GMC Denali, Yukon, Yukon XL, and Sierra as well as the 2002 Cadillac Escalade SUV.

These vehicles use a new version of the GM "CSS" steering column that first appeared in 2001. (*See photograph 2.*) This column is much easier to deal with than the earlier versions because both the upper and lower portions of the shroud can be removed without having to remove the lock plug. The joint between the upper and lower portions of the shroud runs through the centerline of the lock plug. After the shroud has been removed, you will have complete access to the lock assembly.

Despite the fact that the shroud can be removed easily, it is important that you be careful as you remove the upper portion of the shroud. The red plastic hazard-warning switch that extends through the upper portion of the shroud is relatively fragile. I have



1. 2002  
Chevrolet  
Avalanche.



2 . The Avalanche and the  
Escalade EXT use a new "CSS"  
steering column.



3. Use the short end of the TT-  
1008 tool to unlock the truck.



4. Carefully insert the short end  
of the tool into the door.



5. Lever the linkage rod toward the  
front of the truck to unlock it.

spoken with several locksmiths who have accidentally broken this switch. If you break the hazard-warning switch, you will have to replace the entire ignition switch. The ignition switch is not cheap, but even worse it will require a lot of labor to replace it.

When you unlock one of these vehicles, the first thing that you will notice is the way that the weather-stripping fits at the base of the window. On older model trucks and SUVs, the inside weather-stripping has been attached to the top of the upholstered door panel. This made those trucks relatively easy to open with an "under the window" tool. On the new trucks and SUVs, the weather-stripping is very firmly attached to the top of the door itself. This arrangement makes for a very tight fit between the window glass and the weather-stripping. Because of the tight fit, I was unable to use any of the "under the window" style tools to unlock these vehicles. In addition, the very tight fit between the window and the weather-stripping makes it very difficult to see into the door cavity with an inspection light. Fortunately, an inspection light is not needed to unlock these vehicles.

The door lock is mounted into an oversized modular outside door handle that is similar to the one used on the Chevrolet Venture, Oldsmobile Silhouette and Pontiac Montana minivans. The doors use plate-tumbler locks that are very similar to Chrysler door locks. These locks have seven wafer-style tumblers, three on one side of the keyway and four on the other. This makes it possible to pick these vehicles open with conventional lock picks or rocker-style picks. The direction to pick the passenger side door lock is counter-clockwise to unlock the door, clockwise on the driver's side.

To unlock the truck with the Tech-Train 1008 tool, begin by wedging open the weather-stripping at the base of the window. (*See photograph 3.*) Insert your wedge about three to four inches from the back of the window. Because of the tight fit of the window, you will only be able to open a small gap into the door cavity that is barely large enough to allow insertion of the tool.

Carefully insert the short end of the TT-1008 tool (*see illustration A*) into the door and lower it until the top end of the tool is about five inches above the weather-stripping. (*See photograph 4.*) Make sure that the shaft of the tool is vertical and no more than an inch forward from the back of the window

#### Quick Reference Guide

**Vehicle:**

2002 Chevrolet Avalanche and Cadillac Escalade EXT

**Direction of Turn (passenger side):**

Counter-Clockwise  
Tool:

TT-1008 (short end)

**Lock System:**

10-Cut GM, Sidebar Ignition and Plate-Tumbler (wafer) Style Door Locks.

**Security System:**  
PassLock I (MRD)

**Lock Manufacturer:**

Strattec

**Code Series:**

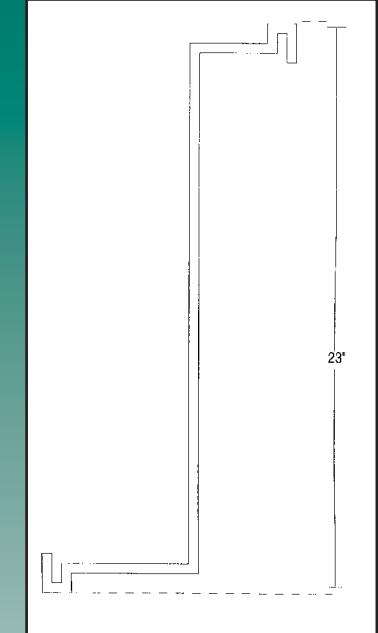
S000A - S711K

**Key Blank:**

Strattec 598007 (Chevy Logo) or 599478 (Cadillac Logo); Ilco P1113; Ilco EZ B102; Jet B102-PHT; Curtis B102.

**Bitting:**

Ignition 1 - 9;  
Doors 3 - 9;  
Tailgate 4 - 10;  
Spare Tire and Toolbox 6 - 10.



A. The TT-1008 tool.



6. With the door panel removed, the linkage rod is shown.

glass. Rotate the tool so that the end that is inside the door is pointed toward the inside of the truck. Pull up slowly until you feel the tool hook onto the lower linkage rod. Twist the tool to bind the linkage, then lever the linkage rod forward to unlock the truck. (*See photograph 5.*) If you fail to hook onto the linkage rod, bend the shaft of the tool slightly so that the tool will reach further toward the inside of the door and try again.

*Photograph 6*, shows the door with the door panel removed. The inside lock control linkage rod, indicated by the blue arrow, is the lower of the two horizontal linkage rods that are attached to the latch. The two linkage rods cross over each other very close to the latch, which is why the linkage rod indicated in the photograph is the upper of the two rods. The inside lock control linkage also runs closer to the outside of the door than the handle linkage, which makes it easy to locate by feel. There are two 90° bends in the lock control linkage rod just forward of the latch that allow the tool to grip the linkage rod very easily. The short end of the Tech-Train 1008 tool can be used to grasp the inside lock control linkage and move it forward to unlock the truck. The point

where the tool contacts the linkage rod is just slightly less than 15" deep in the door.

Unfortunately, there is also a wire bundle, shown by the black arrow in *photograph 6*, located very near the linkage rod. It would be very easy to get the end of the tool hooked onto these wires if you are not careful. Use caution as you probe for the linkage rod. When the tool contacts the linkage rod it will have a very solid feel. But, if you accidentally hook onto the wire bundle, the movement of the tool will feel "mushy."

All of these vehicles have a very substantial frame around the window, so it can also be unlocked with the Jiffy-Jak Vehicle Entry System. To use the Jiffy-Jak, it will be necessary to attack the door from a very high angle at the upper corner of the door. When placing the lever, be sure to support the tool properly with the base-plate and apply pressure at a point that is several inches below the actual corner of the door.

*For more information on the Jiffy-Jak Vehicle Entry System, or any other Tech-Train tool, visit [www.techtrainproductions.com](http://www.techtrainproductions.com) on the Internet.*

TNL

# Everest Primus Debuts



**Part Two  
by Sal  
Dulcamaro**

Last month we covered the design and functional differences between the Schlage conventional lock cylinders and the Schlage Primus, and also introduced the new Everest product

line. This month we conclude with the design and function of the Everest Primus.

## Where did the Check Pin Go?

*Photograph 1*, shows an Everest Primus plug on the bottom and a standard Everest plug on top. Normally the check pin will drop into the hole in the shell if the lip of the undercut groove isn't there to pick it up and release the plug. The Everest Primus keys also have an undercut groove, but in the Everest Primus plug there are side cuts to operate finger pins. The fifth (last) position finger pin is located where a check pin would be located. That pin is set up to lock or unlock the sidebar, rather than to descend and protrude through the shell. *Figure A*, illustrates the operation of the check pin with either



**1. An Everest Primus plug on the bottom and a standard Everest plug on top.**

a n  
E v e r e s t  
k e y o r  
E v e r e s t  
P r i m u s k e y  
l i f t i n g i t . T h i s i s  
w h e r e t h i n g s c h a n g e  
f o r E v e r e s t P r i m u s  
c o m p a r e d t o C l a s s i c P r i m u s .

In Classic Primus, a standard Schlage key would not operate the high security cylinder because the keyway broaching was slightly different and the conventional key would not even enter the keyway. The Everest key can enter the Everest Primus keyway, but is rendered inoperable because of the milled away center section where the side milled cuts would be. I mentioned earlier that I would return to the subject of finger pins. First, look back at *photograph 3*. If you didn't notice the first time, observe that they are numbered up to the number 6, but there were only five sizes of pins in the kit. There is no #5 finger pin, or at least there was no #5 finger pin when Classic Primus was introduced.

Primus finger pins are numbered, but they each represent both a depth and an angle that must be generated in order for the narrow spot of the finger pin to fit into the mating slot within the sidebar. The angle

position can be left, center or right. The depth can be either shallow or deep. The combination of the angle and depth can be translated into a specifically numbered finger pin. Let's see how it works.

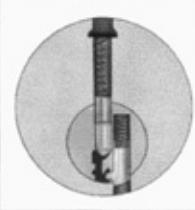
## Finger Pins and Side Cuts

*Figure B*, shows the physical profile of finger pins, in side and back view. The new style was introduced in 1998 and is not unique to Everest Primus. Classic Primus manufactured after then should have new style finger pins. Except for the minor physical difference, the finger pins can be read (decoded) the same way. If you have a pair of tweezers with small enough tips, *figure C* shows how you can grasp a finger pin by the web (narrow spot that fits into the sidebar slot) and hold it in front of you to decode the tumbler angle. With the hollow end of the finger pin up, *figure D* shows what each angle should look like. After you determine the angle you will need to determine whether the finger pin is for shallow or deep.

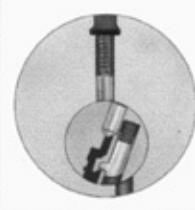
The web height on a finger pin will vary slightly between either a left or right angle compared to a center angle for both shallow and deep. *Figure E*, shows the side and back views of left or right angle finger pins. Obviously the angle will differ between a left and right pin, but the height of the web will be the same for left shallow and right shallow as it is for left deep and right deep. For shallow positions: 1 is left and 5 is right. For the deep positions: 2 is left and 6 is right. The web for center pins is positioned slightly lower for both

## Where did the check pin go?

- The check pin is used in Everest conventional cylinders to "check" for the lip from the undercut groove. In Everest Primus, the finger pins do the checking.



**Locked**



**Unlocked**

**A. The operation of the check pin.**

shallow (3) and deep (4), compared to either left or right angle (*see figure F*).

*Figure G*, shows the relative web height for all the different finger pins compared to the others. Remember that where two different identifying tumbler numbers are indicated, one is a left angle and the other is a right angle. If you ever spill a Primus finger pin service kit, you will probably be glad you know how to decipher the

tumblers. To convert angle and depth into actual finger pin tumbler numbers, you can use the following chart.

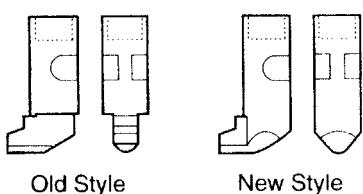
	Left	Center	Right
Shallow	1	3	5
Deep	2	4	6

#### Milled Side Cut Spacing

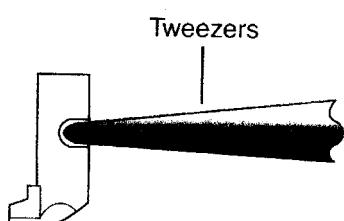
I mentioned earlier that the five milled side cuts (for the finger pins) are found in between the six conventional key cuts. The actual pin chambers are exactly in the middle of the corresponding conventional pin chambers. If a side cut happens to be

for a center angle finger pin, the actual cut will be centered between the conventional cut before and after it. If the milled side cut is for a left or right angle finger pin, it will be slightly shifted off center to the left or right. In *figure H*, the arrows on top point to the centers of the conventional pin chambers and actual key cuts. The arrows on the bottom (pointing upward) indicate the centers of the finger pin chambers. The six possible cut positions in each space are shown but are quite small and faint. *Figure I*, shows a section of the key enlarged to

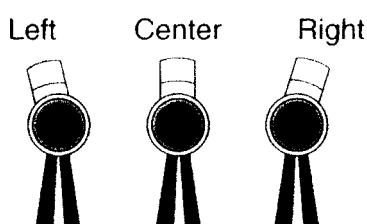
*Continued on page 52*



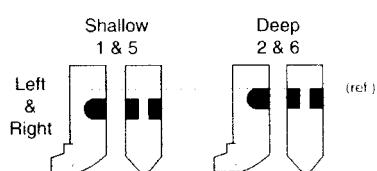
**B. The physical profile of finger pins.**



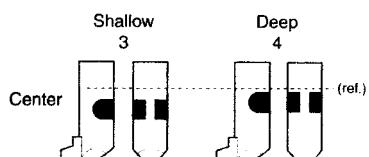
**C. Shows how you can grasp a finger pin.**



**D. What each angle should look like.**



**E. Left or right angle finger pins.**



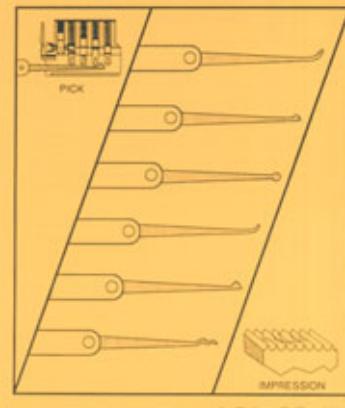
**F. The web for center pins is positioned slightly lower for both shallow and deep.**

# Picking & Impressioning

**The National Locksmith®**

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## *Picking and Impressioning*

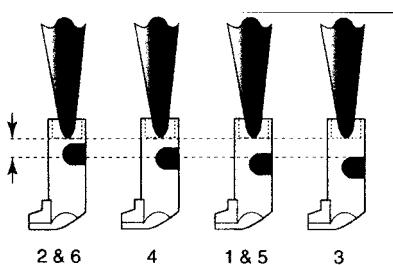


Here is the most complete book ever published on picking and impressioning locks! You will have everything you need to know about how to open almost every kind of lock that can be picked.

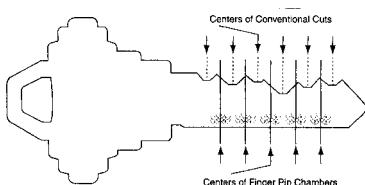
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#PI

**Continued from page 49**

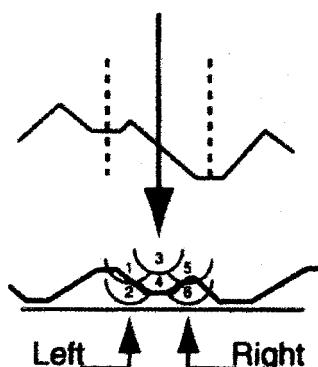


**G. The relative web height for all the different finger pins.**

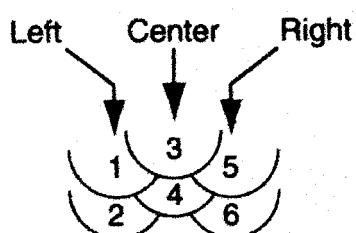


**H. The centers of the conventional pin chambers and actual key cuts.**

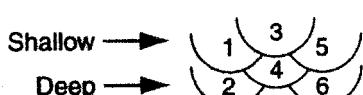
### Centered Between Conventional Cut Roots



**I. A section of the key enlarged to better illustrate those cut variations.**



**J. The left, center and right angle cut variations are labeled by corresponding finger pin numbers.**



**K. Shallow and deep cut positions are similarly labeled.**

better illustrate those cut variations. The left, center and right angle cut variations are labeled by corresponding finger pin numbers, in figure J. Shallow and deep cut positions are similarly labeled in figure K.

Since the side millings on a Primus key are always pre-cut at the factory, there is no need to know depth and spacing for key cutting purposes. The value of being able to decipher Primus side cuts is to provide you with information to code the lock with the correct finger pins.

Why the sudden introduction of the #5 finger pin? I think that is fairly obvious. If you recall, an Everest cylinder requires a raised surface toward the tip of the Everest key to lift the check pin. With the integration of Everest Primus, any side milling cut combination can be made to work as long as the finger pins match the cuts. Where the complication occurs is that Everest Primus keys are supposed to be able to operate standard Everest cylinders, too. That means that in the fifth (most forward) finger pin position, you must have a shallow cut to lift the check pin. So whether you want to use a left, center or right finger pin, it must be shallow rather than deep. For left you have #1-shallow and #2-deep. For center you have #3-shallow and #4-deep. Prior to the introduction of the #5 finger pin, you only had for right, #6-deep. With the #5 pin there is now right-shallow. That will work with standard Everest. There is no need to worry about not choosing deep key cuts for your fifth finger pin position, because only the factory makes those cuts anyway. Now you'll know why.

I couldn't figure out why the #5 finger pin had been previously omitted from the Primus service kit. I was informed that with Classic Primus the #5 finger pin was used only on Level 4 (end user time zone or nationwide exclusive) sites. Since most Primus dealers had no use for that pin, it was omitted from the service kit to reduce the cost. With the need for a shallow cut to handle the Everest cylinder check pins, the need for a #5 finger pin grew. It is in the new service kits at no additional cost.

The sample products I used for this article were either pre-production or early production units. The logos on the keys and locks may appear a little different from final production units. Both Everest and Everest Primus are available in some "open"

keyways, so don't presume all Everest products should be considered truly restricted. There are different degrees of key control.

### Key Control Levels

The underlying purpose of Everest is key control. Prior to Everest, Schlage only had key control with Primus. There was no lower priced standard security product from Schlage that had key control. The Everest line fits the bill but is not truly restricted in all categories. There are three different families of keyways: B, C and D. The only real difference between Classic C keyways (pre-Everest standard security) and the Everest C Family is that the Everest C is only sold to commercial dealers and won't be found in home centers and shopping mall key stands. Everest C, though, can be stocked and duplicated without restrictions. The Everest D family, however, is truly restricted. The restricted keys have an ID # and can be traced to their origin. Everest D Family keys are drop shipped from the factory to an end-user specified location. The Everest B Family is also restricted, but is for SFIC (Small Format Interchangeable Core). In SFIC, Schlage offers a dealer exclusive keyway. These keys bear a dealer ID number rather than a facility ID.

Everest Primus (high security) will only be available in C and D Family keyways. It will not be available in SFIC (B Family). Key control lasts as long as the enforceable patent. Classic Primus has a patent that lasts into the year 2007. The patents for Everest and Everest Primus last until 2014.

Everest Primus cylinders and keys are now available for you to offer to your customers. The marketing of Everest and Everest Primus is centered on key control. If you have customers who are worried about who has copies of their keys, you now have another product option to give them.

*For more information on Schlage products call: 800-847-1864 or (719) 264-5300; Fax: 800-452-0663; Web: www.schlage.com.*

You can look for any updates or corrections to any of my articles at my web site: <http://home.earthlink.net/~lockwriter>. Look under the link at "Tech Article Addendum." If you have information you think I should know, you can e-mail me. A link to my e-mail is on my web page. **TNL**

# TUBULAR KEY MACHINES

## PART 3



by  
**Bob Sieveking**

Last time in our series on tubular key machines we covered the HPC Scotsman™ 747XU Tubular Duplicode™ and ILCO/SILCA Crown Tubular Key Duplicator. This month we conclude with the Framon TKM-100.

### Framon TKM-100 Tubular

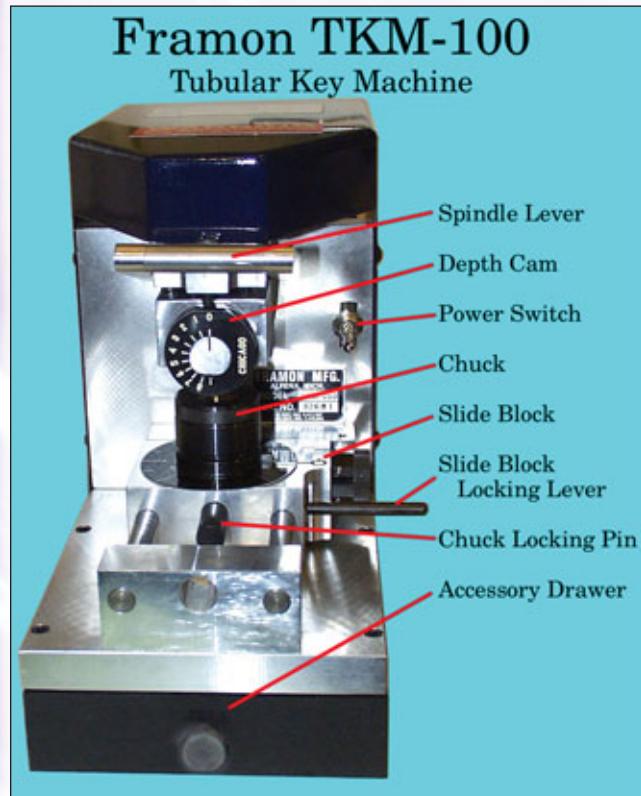
The Framon TKM-100 tubular key machine is a heavy-duty code machine. (*See photograph 1.*) The Framon TKM-100 is ten and one half inches (10-1/2") wide and sixteen inches (16") deep. It stands eight inches (8") high. The machine weighs thirty-three pounds (33 lb.). The TKM-100 uses 115 V AC power, but is also available with a 12 volt direct current (12V DC) motor for mobile use or a 220V AC motor.

The Framon TKM-100 machine key chuck is designed to accommodate tubular keys from .365" O.D. to .406" O.D., which covers all popular tubular keys, from the small bore 137S to the large diameter UL keys. Pre-set spacing (elevation) adjustments allow the Framon to quickly make master cuts and cut-within a cut type keys. Unlike any other code machine, the Framon TKM-100 uses depth cams to preset the cut depths for different manufacturers, eliminating the need to adjust manufacturers codes to the calibration of the machine. Easy to read spacing plates, specific to the individual lock manufacturer, or configuration (right-center-left), allow cuts to be made without a great deal of mathematical interpolation. If cut spacing is non standard, a universal spacing plate calibrated in degrees can be used to accurately locate the cuts on the key. The TKM-100 uses a six flute carbide end mill cutter, designed to cut brass or steel keys.

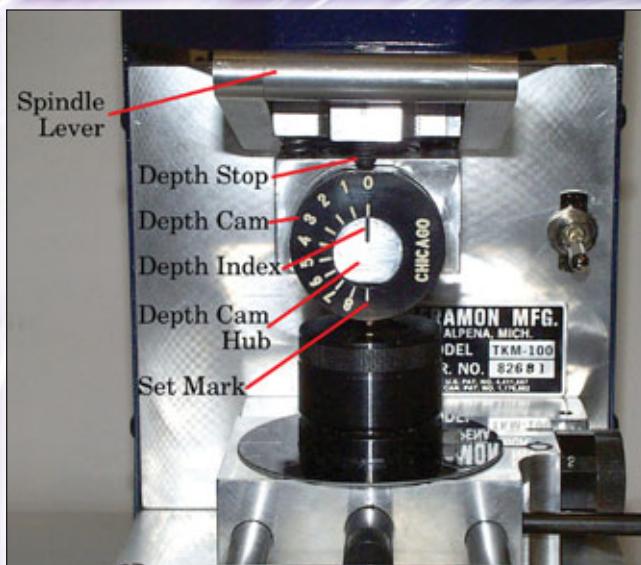
In this shop, we prefer code cutting tubular keys to duplication. Probably more than any other type of key, the tubular key wears very quickly. The tip of the key wears away, shortening the actual length of the key bit. When duplicated, the new key has cuts made too shallow. The duplicated key will not operate the cylinder well. A new key cut to manufacturers dimension, will many times operate the customers cylinder noticeably smoother than the worn original. Decoding the customer's key only takes a few seconds. Decode and originate a new key rather than duplicating and perpetuating the performance of a worn one.

The Spindle Lever, at the top, controls the motion of the spindle. Pull the Spindle Lever down to advance the cutter into the key being cut. Release the lever to allow the spindle to spring back to the retracted position. The Depth Cam limits the vertical motion of the spindle and end mill key cutter. The Power Switch turns the motor on and off. The key being cut is held in the self-centering two-element V-block type key Chuck. Clockwise rotation of the chuck nut closes it to hold the key. The Slide Block moves to the front of the machine to load or remove the key.

With the key loaded in the Chuck, the Slide Block is moved to a position under the Depth Cam, to gauge the uncut key. When the key has been gauged, the Slide Block is moved to a positive stop at the rear of its' travel, which precisely positions the key under the



1. The Framon TKM-100 tubular key machine.



## 2. The unique pre-set cut depth arrangement.

cutter. The Slide Block Locking Lever lifts upward to lock the Slide Block in place. To release the Slide Block, push the lever down.

The Chuck Locking Pin secures the chuck in place to allow the closing nut to be tightened. Push the pin inward, with the chuck at the start position as shown in the photograph, to engage the locking pin. Pull the pin out to free the chuck rotation. The Accessory Drawer in the machine base, accommodates the Depth Cams, Spacing Plates, and an Allen wrench.

The unique pre-set cut depth arrangement of the Framon TKM-100 is detailed in *photograph 2*. As the Spindle Lever is pushed downward, the Depth Stop Screw contacts the top of the Depth Cam, limiting its' downward travel. With the Depth Cam in the position shown in the photograph, the cutter would advance to the key tip without removing any material. This would be a zero ("0") or "no cut." If the Depth cam is rotated to bring the number one (#1) on the Depth Cam into alignment with the Depth Index, the Depth Stop would contact the Depth Cam at a position to allow the Cutter an additional sixteen thousandths of an inch (.016") of travel. The cutter would advance down to the tip of the key, and .0016" more. A cut would be made in the key tip, exactly .016" in depth.

Rotate the cam to the number three (#3) position, to make a .032" deep cut in the key tip. The Depth Cam labeled "Chicago," is calibrated to generate cut depths that agree with the Chicago Lock™ depth specification. The Depth Cam is not a simple eccentric cam. The edge of the cam is milled to form individual precision seats, which accommodate the Depth Stop Screw, and present a flat surface for the stop. The stamped and filled graduations on the face of the Depth Stop Cam, align the stop seat at the correct position under the stop screw when a depth is selected by the Depth Index. The "Set Mark," on the Depth Cam is used to position the cam to gauge the key before beginning the cutting process.

The Depth cam rotates on the Depth Cam Hub, and is removable to accommodate other depth cams. *Photograph 3*, shows the four options. The Chicago™ cam, shown at number 1, which we looked at earlier, is



# Pocket InstaCode

Pocket InstaCode has all the important features of the InstaCode program, packed into a program small enough to run on a Pocket PC.

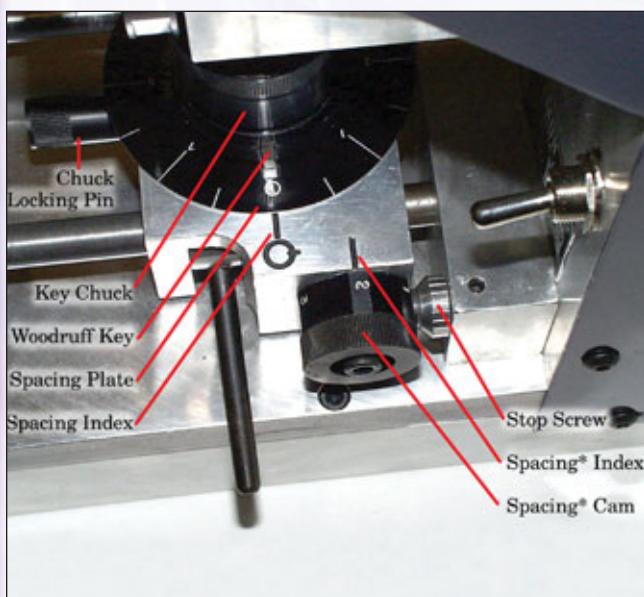
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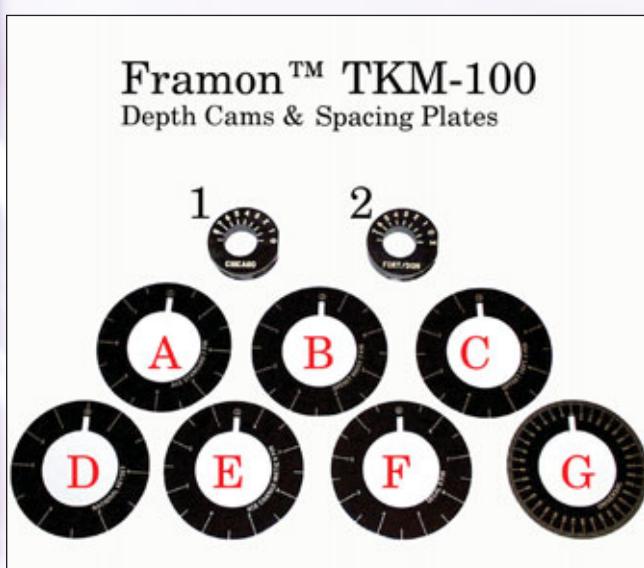




**3. The Depth cam.**



**4. The Spacing Plate fits over the Key Chuck.**



**5. The standard Spacing Plates used.**

calibrated to produce keys using Chicago depths. The reverse side of the Chicago™ cam, shown at number "1r," is calibrated to produce cut depths that agree with Dynalock™ and Unican™ cylinder manufacturers. A second Depth Cam, shown at "2," is calibrated to Fort Lock™ and Dominion™ depths. The reverse side of the Fort cam, shown at "2r," is calibrated to American Lock™ tubular key depths. Two reversible Depth cams furnish us with "preset depth calibration" for nearly all major tubular lock manufacturers specifications. The cam numbering also agrees with each specified manufacturers published codes. Some exceptions may exist, but I have not experienced them.

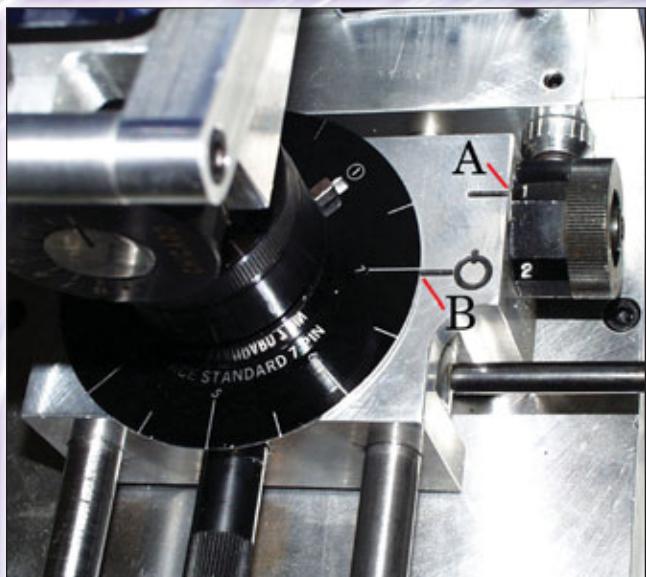
Now that we have covered the method used by the Framon™ TKM-100 to specify the cut depths, let's consider the cut spacing on the key tip. The rotating key chuck is mounted to the Slide Block, and is free to rotate three hundred sixty degrees ( $360^\circ$ ) when the Chuck Locking Pin is retracted. The cutter can place a cut at any point on the edge of the key. To accurately position the cuts on the key bit, The Framon™ TKM-100 uses a calibrated Spacing Plate. As you see in *photograph 4*, the Spacing Plate fits over the Key Chuck and locates on the Woodruff Key. The Woodruff Key rotates with the Key Chuck. As the Key Chuck is rotated, the Spacing Plate moves with it. By using the Spacing Index with the calibrations on the Spacing Plate, we can position the key to receive cuts in most desired configurations (7-pin right, 7-pin left, 7-pin centered, 8-pin, and etc.). The Spacing Plate shown is calibrated to place the cuts in a 7-pin centered configuration. This is Plate Number "1."

*Photograph 5*, shows the standard Spacing Plates used with the Framon™ machine.

They are:

- A) .....ACE™ spacing Plate .....7-pin centered
- B) .....Offset Right.....7-pin right
- C) .....Offset Left .....7-pin left
- D) .....National Keyset™ .....7-pin
- E) .....ACE™ Change-A-Matic .....8-pin
- F) .....Segal™ .....8-pin
- G) .....Universal  $360^\circ$  .....Calibrated in  $2^\circ$  Increments

Because the Framon TKM-100 is designed to cut a variety of different key diameters and must be able to make keys that have stepped cuts (cut within a cut) and oversized cuts (master pins), it is necessary to regulate the distance from the center of the key chuck to the cutter. On previous machines, we referred to this adjustment as "elevation." Framon prefers to call this adjustment "Spacing\*." Don't confuse this with the "Cut Spacing," discussed above. This Spacing\* refers to the spacing that regulates the web dimension of a tubular key. *Photograph 4*, shows the Spacing\* Cam and Spacing\* Index. As the Slide Block moves to the rear of the machine, the Spacing\* Cam will contact the Stop Screw, limiting its' travel. The numbered (calibrated) position of the Spacing\* Cam, read at the Spacing\* Index accurately determines the position (elevation) of the Slide Block. The Spacing\* Cam has six positions, to cover the possible spacing requirements for most tubular keys.



6. Bring the depth number into alignment with the Depth Index.

They are:

- 1.....standard diameter (.375) .....regular cuts
- 2.....standard diameter (.375) .....master cuts
- 3.....small diameter (.365) .....regular cuts
- 4.....small diameter (.365) .....master cuts
- 5.....large diameter (.400) .....regular cuts
- 6.....large diameter (.400) .....master cuts



7. The machine comes with a precision dial test indicator.



## ProMaster 5

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To make a key with the Framon TKM-100, we will suppose a standard 137 key, using a 7-pin centered configuration and Chicago™ depths. Move the Slide Block Locking Lever down, to unlock the Slide Block. Move the Slide Block to the front of the machine. Rotate the chuck to align the Woodruff Key with the Spacing Index on the Slide Block, and engage the Chuck Locking Pin. This will lock the Key Chuck in position, so we can open (loosen) or close (tighten) the Chuck on our uncut key. Select the proper Depth Cam and Spacing Plate. Install the Depth Cam on the Depth Cam Hub and rotate the Depth Cam to bring the Set Mark to the Depth Index. This Position will be used to gauge our uncut key.

Install the correct Spacing Plate over the Key Chuck, observing the position of the Woodruff Key to insure that the Spacing Plate is installed properly and locked in place. From our chart (above), or from the Framon depth and space book, we find that a standard diameter (137) .375" O.D. key, having regular cuts, uses the number one (1) position of the Spacing\* Cam. Rotate the Spacing\* Cam to align the number one (1) with the Spacing\* index on the Slide Block. This will adjust the "elevation" of the cuts properly for the key being cut. The machine is now ready to receive the key.

Insert a blank 137 tubular key into the Chuck, and close the Chuck lightly. Observe the orientation of the key icon, at the end of the Spacing Index. The locating key of the blank is away from you. Press the key down against the spring pressure of the Chuck and tighten the chuck temporarily.

Move the Slide Block rearward to bring the key directly under the Depth Cam. Notice that the Depth Cam presents a flat surface at the bottom when it is in the Set (Set Mark) position. Open (loosen) the Key Chuck slightly, to allow the uncut key to pop up. It will pop up, to be gauged on the bottom surface of the Depth Cam. This operation sets the correct height for the key, with respect to the cutter. Retighten the Key Chuck.

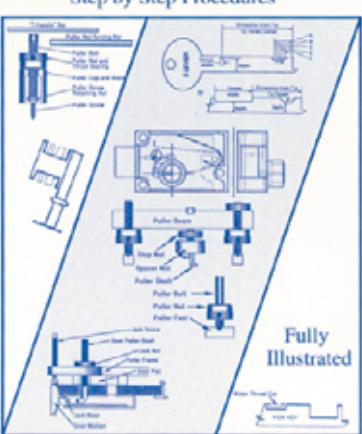
Move the Slide Block to the rear of the machine. Rearward movement will be stopped by the Spacing\* Cam as it contacts the Stop Screw. Lift the Slide Block Locking Lever, to lock the Slide Block in position. We are ready to make our key.

Pull the Chuck Locking Pin forward to release the rotation of the Key Chuck. Rotate the chuck to bring the #1 position on the Spacing Plate into alignment with the Spacing Index. Select the desired depth on the Depth Cam and bring the depth number on the Depth Cam into alignment with the Depth Index on the Depth Cam Hub. (*See photograph 6*). Turn on the Power Switch and press down the Spindle Lever carefully. Congratulations, you just made the first cut in the key.

Advance the Key Chuck clockwise to bring the number 2 on the Spacing Disk to the Spacing Index. Select the appropriate depth, and turn the Depth Cam to bring the depth number to the Depth Index on the Depth Cam Hub. Press down the Spindle Lever carefully, to make the second cut. Continue, as above until all cuts have been made. Turn the Power switch

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off. Release the Slide Block Locking Lever to bring the Slide Block to the front. Lock the Key Chuck in position with the Chuck Locking Pin, and open the Key Chuck. Remove and de-burr the key on a flat piece of emery cloth.

The Framon key machine comes with a precision dial test indicator, shown in *photograph 7*. The Indicator is fitted with a special fixture to measure and decode tubular keys. This device makes key measurement fairly quick and easy. Check the cut key to insure that your machine is cutting accurately. The indicator is also used to decode customer keys.

A Chicago ACE™ key was decoded using the Framon tubular key decoder and the Framon depth chart. A duplicate was made by code, using the Framon™ TKM-100 key machine. The test key operated the test cylinder perfectly.

I hope you found this review as exciting as I did. Test driving all of these machines, and studying the literature that accompanied them was very educational for me. Maybe you picked up something too. I certainly hope so. Good Luck.

*For more information on the manufacturers covered, contact:*

**A-1 Security Manufacturing Corp.**  
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Fax: (804) 359-9415  
E-mail: fmcc@demandal1.com

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Fax: (252) 446-4702  
E-mail: [info@irm.kaba.com](mailto:info@irm.kaba.com)  
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*Volume II*

1987 \* 1988 \* 1989 \* 1990

By Dave McOmie

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## Literature & Brochures

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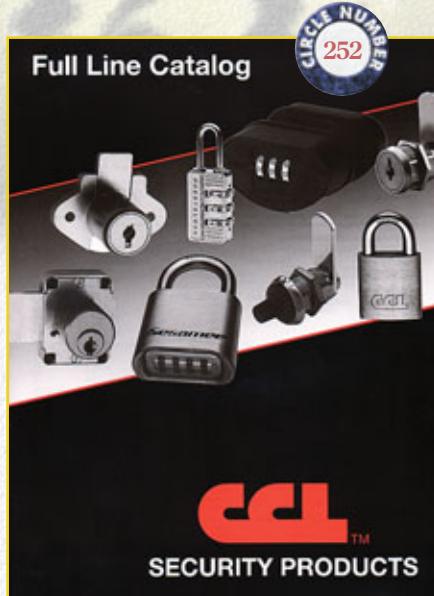
Aable Locksmiths' new catalog is now available on the web at: [aable.interwit.com](http://aable.interwit.com). The entire line of products, designed and patented by Frank Markisello, are shown complete with prices. Pages can be



downloaded and printed. Frank, who has been in business as a locksmith for over 32 years, is available to answer any questions regarding the tools or their application.

### CCL Full Line Catalog

CCL Security Products' catalog contains both alphabetic and product type indexes for the entire line of cams and cabinet locks, chest and drawer locks and catches,

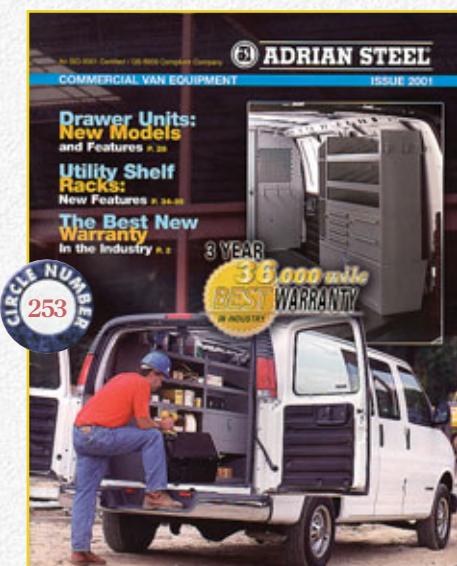


handles, holding plates, Prestolocks, Sesamee locks, special purpose locks and more. The catalog is illustrated with product photos, as well as line art of product dimensions. Also included in the catalog are CCL key blanks and keying kits for cabinet locks, as well as countertop display boards to show the product line. Further product details can be found on the company's web site: [www.cclsecurity.com](http://www.cclsecurity.com).

### Commercial Van Equipment Catalog

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*Continued on page 64*

**Continued from page 62**

Request a catalog on the web at [www.adriansteel.com](http://www.adriansteel.com) or call toll-free (800) 677-2726 for more information.

### DORMA Catalog

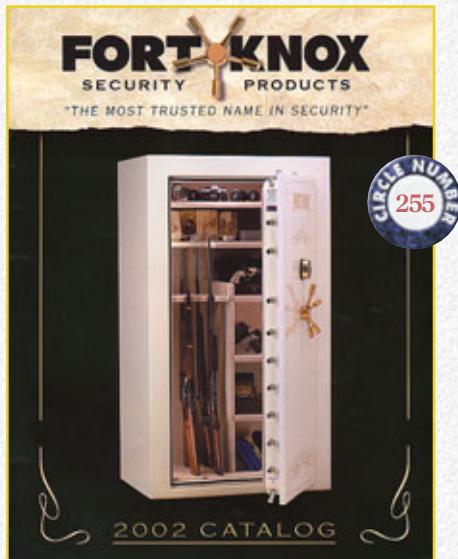
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 An advertisement for Indiana Cash Drawers featuring a silver electronic cash drawer with its tray partially open, showing internal compartments. A red circle with the number '256' is in the top right corner. Below the image is the text "WHEN YOU'RE EVALUATING ELECTRONIC CASH DRAWERS..." and the Indiana Cash Drawers logo: "ICD INDIANA CASH DRAWER CO. for the most customers per unit".

### Jensen Tools 2002 Master Sourcebook

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 An advertisement for Jensen Tools featuring a black tool kit case filled with various tools. To the right are several small images of different tools and equipment. A red circle with the number '257' is in the top left corner. Text includes "See Our Comprehensive Telecom Products Pages 118-121", "Basic Power Tools and Bit Sets Page 388-389", "Field Accessories Easy-to-Use Instrument Pages 308-311", and the phone number "1-800-426-1194". The website "www.jensentools.com" is also listed.

366-9662 or (602) 438-1690; E-Mail: [jensen@stanleyworks.com](mailto:jensen@stanleyworks.com); Web: [www.jensentools.com](http://www.jensentools.com).

### Kaba Ilco Access Control

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**CIRCLE NUMBER 258**

 An advertisement for Kaba Ilco Access Controls featuring a woman working at a desk with a computer monitor, surrounded by various electronic components and equipment. A red circle with the number '258' is in the top right corner. Below the image is the text "Access Controls Catalog August 2001" and the Kaba Ilco logo.

**Continued on page 66**

**Continued from page 64**

For a catalog call: 800-849-8324 or (336) 725-1331; Fax: 800-346-9640 or (336) 725-3269.

### Lund Key Control Catalog

Lund Key Cabinets, featuring visible key control, are described in the new 16-page catalog. New products shown are a key cabinet with a locking inner compartment and a locking exterior door, a dual lock key cabinet for extra security, and a locking storage cabinet. Prison key cabinets of all sizes are also included.

Lund makes over 70 different styles of key cabinets and panels, all complete with systems for controlling keys. Capacities range from 10 hooks to 3312 hooks. The system can be one tag or two tags.

For information, write to Lund Equipment Co., Inc., PO. Box 213, Bath, Ohio 44210. Phone (330) 659-4800.

### MBA's New Catalog

The new 2002 catalog from MBA USA, Inc. is filled with safe locks, tools, borescopes, and the schedule and descriptions of all the training classes we offer.



Contact us at: (888) 622-5495, to be added to our mailing list.

### Perma-Vault

Perma-Vault Safe Company's product catalog contains photos and

specifications of a broad assortment of cash protection system units, hopper safes, wall safes, in-room safe deposit boxes, cash boxes, pistol boxes, through the wall or door depository safes, depository safes, hotel safes, safe deposit boxes and in floor safes. The company custom builds safes, to assist in satisfying a particular customer's needs.

For more information call: (800) 662-3360; E-mail at: sales@perma-vault.com.

### Safety Technology International, Inc.

Safety Technology International, Inc. manufactures protective covers, multi-purpose push buttons, and alarms to help prevent theft and vandalism to: fire pull stations, smoke detectors, strobe/horns, biometrics, keypads, exit signs, emergency lights, clocks and bells.

Covers are manufactured from polycarbonate, 9 gauge, corrosion resistant, steel wire or stainless steel. The company also manufactures extinguisher alarms, to help prevent theft and misuse of fire extinguishers and exit alarms, to warn of unauthorized entries and exits. Many products carry a lifetime warranty and are UL/cUL listed.

For more information call: (800) 888-4STI (4784) or (248) 673-9898; Fax: (248) 673-1246; E-Mail: info@sti-usa.com; Web: www.sti-usa.com.

### Seco-Larm

Providing a complete listing of the burglar security products and accessories that have made SECO-LARM® the dealer's choice, the new, 1st quarter 2002 catalog is hot off the press. Covering RF transmitters and receivers, alarm pager systems, electromagnetic locks, photo beam detectors, voice dialer, alarm control panel, access control keypad, shear lock, electric deadbolt, electric door strikes, push-to-exit bar, push-to-exit plates, door cords, power supplies/chargers, timer module, audio discriminator, and much, much more. The catalog includes our newest, state-of-the-art products.

Along with product descriptions, catalog entries include photographs, and, where needed, circuit/connection diagrams and comparison charts to assist the buyer in making the best product decision.

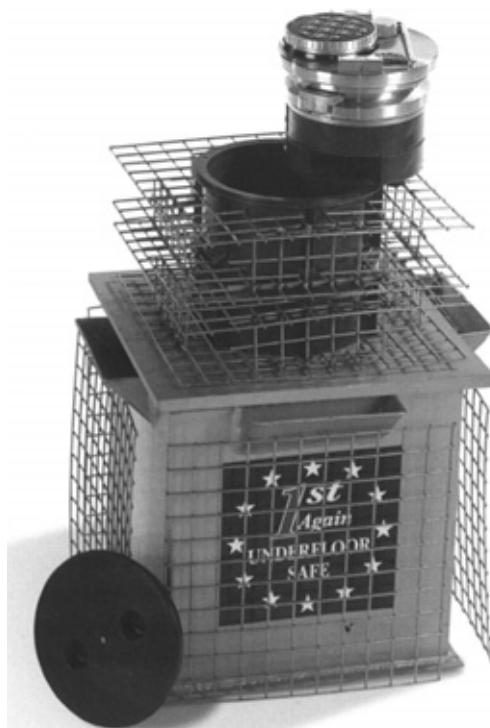
For a catalog call: (949) 261-2999; Fax: (949) 261-7326; Web: www.seco-larm.com. **TNL**

# Churchill Safes

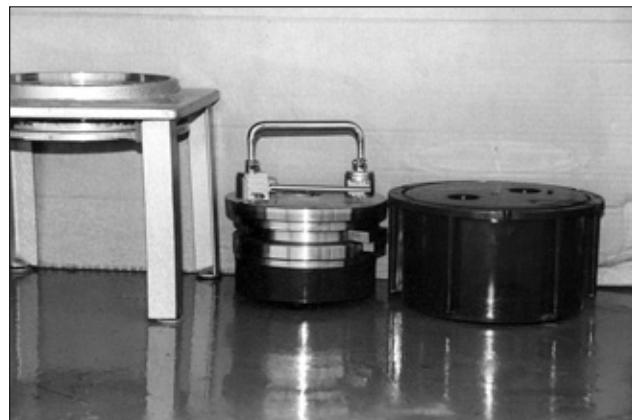
## Churchill Safes

### The Next British Invasion

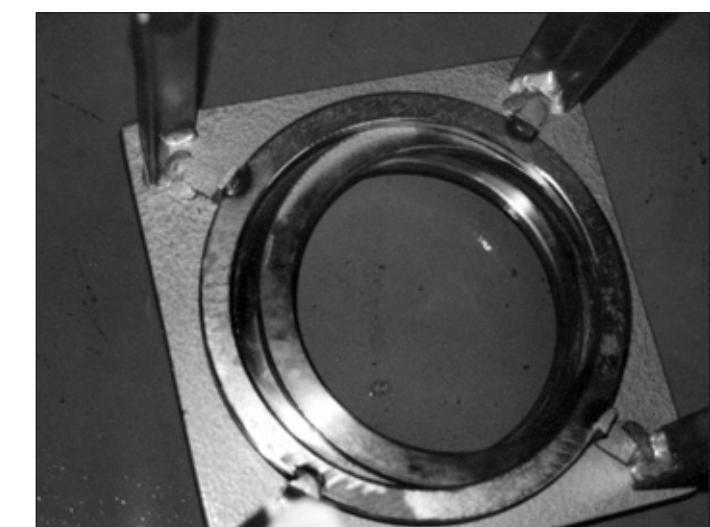
by Todd Kerrn, CPS, CMS



**Photograph 1.**



**Photograph 2.**



**Photograph 3.**



**Photograph 4.**



**Photograph 5.**

What makes a Churchill Grade 3 stand out? The doors are made of stainless steel and have incorporated ball bearings and copper plating into them, making them both torch and drill resistant. (*See photograph 2.*) You have your choice of locks: A class B High Security unpickable key lock, a 4-wheel combo lock or an electronic lock.

Under the collar of the safe is a ring, that when the door is locked, extends the ring into a lip that surrounds the door to prevent pulling attacks. (*See photograph 3.*) In essence, over half the circumference of the door is engaged in the locking action.

The Euro Emerald can also be equipped with a deposit chute. A unique tubular design that not only has anti-fish baffles, it also has a locking cap that covers the chute to stop fishing attacks cold. (*See photograph 4.*)

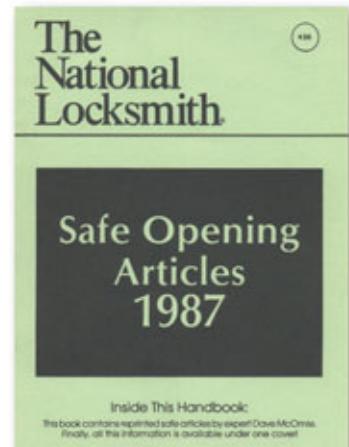
Does all this sound like too much security? If so, then lets take a look at the domestic product line. (*See photograph 5.*) Churchill produces one of the most economical high security safes on the market today for residential or light commercial use. As time goes on and the value of the contents of the safe increases, there is no need to buy a new safe, the doors are upgradeable for higher security. All safes have dust covers and optional extended necks to add security.

Churchill Safes offers a wide range of floor safes in various configurations to meet any security need.

For more information on Churchill Safes USA call Jim Jeffries at: 866-577-7233.

TNL

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#SA - 1

# MULTIMETERS

An  
In-Depth  
Overview

## PART 3

by Richard Allen Dickey

**D**igital, digital, digital. Everyone has gone digital. At least that is what some will tell you. A digital multimeter is easy to read, easy to use and usually easy to understand. If you read the last article, you will probably agree that in most cases it is hard to screw up with a digital multimeter.

However, there are times when I am so relieved to have an analogue multimeter. What's the big deal? Well, did you know that when testing AC or DC voltage with an analogue multimeter, you don't need a battery in the multimeter? That's not true with a digital multimeter. I bet a lot of you didn't know that!

Why? Because the voltage that you are reading is what actually makes the needle move on an analogue multimeter. Then why is there a battery inside an analogue multimeter? Because it is there to provide the power needed to test resistance.

There is another reason for using an analogue multimeter that you might find interesting. Here is an example. If something is wrong with a power supply and it starts pulsing, the display on a digital multimeter will just flash or show constantly changing numbers that don't mean anything. This type of display can also happen if there is nothing for the multimeter to read. So there are times when you can ask yourself, is there something there or is the meter just acting a little weird?

The needle on the display of an analogue multimeter will fluctuate under these conditions. Often it will fluctuate between two values. This could be very useful at times. Exactly how the needle will fluctuate

will depend on a lot of different factors. For instance, how drastic is the fluctuation in voltage or how fast is the fluctuation in voltage. Both of these factors will make a difference in exactly how the needle will move.

For those who were not able to read part I and part II, here is the basic difference between a digital and an analogue multimeter. (*See photograph 1.*) The digital multimeter will have a liquid crystal display (LCD) while the analogue multimeter has a needle that moves from left to right. This is a very basic explanation, but it is good enough for now.

Let's take a look at a typical display on an analogue multimeter. (*See photograph 2.*) To start with, the top portion of the display is only used to read resistance. (*See photograph 3.*) The middle part of the display is used to display AC and DC voltage as well as current readings. (*See photograph 4.*) The very bottom part of the display is used to read audio levels. (*See photograph 5.*) You will probably never have a need to measure audio levels, so we will ignore the very bottom of the display.

Now that you have seen the numbers all over the face of the display, it is time to explain how to use them. The easiest way to start is in the voltage portion of the display. With the selector switch set to "10 DCV" what part of the scale do you use. (*See photograph 6.*)

Take a look at the far right side of the display. You will see a "10", "50" and a "250" circled. (*See photograph 7.*) These three numbers correspond to settings on the selector. With the selector set to "10 DCV"

**Continued on page 72**



I. Here you can see a digital and an analogue multimeter side by side.

**Continued from page 70**

you will use the portion of the scale that ends in "10". The portion of the scale that ends in "10" has five other numbers included. Those numbers are 0, 2, 4, 6 and 8.

In photograph 8, I am testing a DC voltage with the selector switch set to "10". Can you figure out what the voltage is? Photograph 9, shows a close up of the needle to make things a little easier to read. That's right, it is just barely under "2" volts. If you thought it was just over "2", you would have been wrong and here is why.

You were either looking at where the needle passes through the number or you were looking at the lines on the red portion of the display. The red portion of the display is for ACV and I will show you why later. The numbers are just there for reference. You always have to use the lines on the scale to make your reading. When the selector is set to black, you must use the black scale.

What if the selector switch was set to "250" instead of "10"? (See photograph 10.) The needle is in exactly the same position as before.



**2. This is a typical display on an analogue multimeter.**



**3. The top part is only used for resistance.**



**4. The central part is used for AC and DC voltage measurement as well as current readings.**

(See photograph 11.) But because we are using a different portion of the scale, the same needle position means something totally different. In this case the reading is just barely under "50" volts.

Lets look at another example. With the selector set to "500" what part of the scale would you use? (See photograph 12.) The numbers on the far right (refer back to photograph 7) are "10", "50" and "250". There is not a "500" there. To save room on the display, the manufacturers use a shortcut. If we added a "0" to the "50" we would have a "500". The other numbers within the same scale are 0, 10, 20, 30 and 40. (See photograph 13.) By simply adding a "0" to each of these numbers, you get 100, 200, 300 and 400.

The same thing is done when the selector is set to "2.5" DCV. You use the "250" scale and slide the decimal place to the left two places. This is an easy one. The number "150" in the "250" scale is equal to "1.50" when



**5. This is the audio level section. Something you will probably never use.**



**6. The selector switch set to 10 DCV.**



**7. This display has three different scales.**

the decimal place is slid to the left two places.

Now with this new information, take a look at photograph 13 and decide what the display is trying to say. Did you say "170" volts? If you did you are right. If you did not, lets take a closer look at the scale.

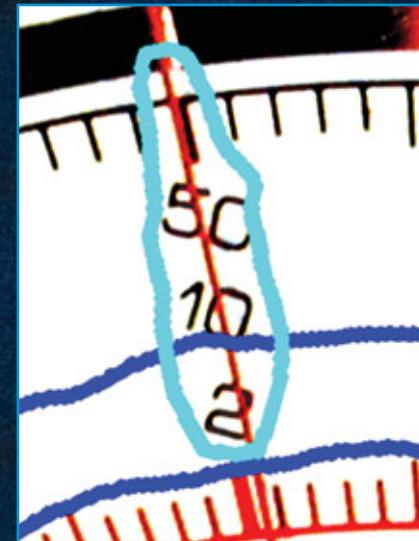
Photograph 14, is a close up of the needles position on the scale. The thick black marks correspond to the numbers 10 and 20 on the scale. Between the thick black marks are nine thin black marks. Each thin black mark is equal to one in this example. If you start at the thick black mark above the "10" and count each thin black mark as "1", you will end up with "17" by the time you get to the needle. Add that extra "0" we discussed earlier and the "17" becomes "170" for our 170 DCV. Now that wasn't so bad, was it?

Now let's try something just a little different. Instead of using the DCV selection on the analogue multimeter, let's use one of the ACV selections for measuring AC voltage.

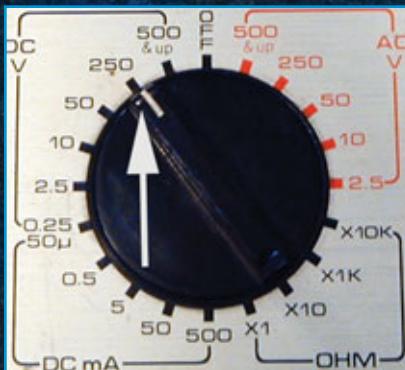
Set the selector switch to "10" on the ACV side. All of the ACV settings are in red. (See photograph 15.) Why? It is telling you that you need to use the red part of the display to properly read an AC value. (See



**8. We are testing a DC voltage with the selector switch set to 10 DCV.**



**9. Here is a close up of the display.**



**10. The selector switch is now set to 250 DCV.**

*photograph 16.) You still use the black numbers, but you need to use the red lines. (See photograph 17.)*

*Photograph 18, shows a close up of the needle. We can see several things in the close up. First of all, the needle is to the right of the thick red line, but slightly to the left of thick black line up above. The reason I mention this is to show that there is a difference between the red and black scales. Not much, but a little.*

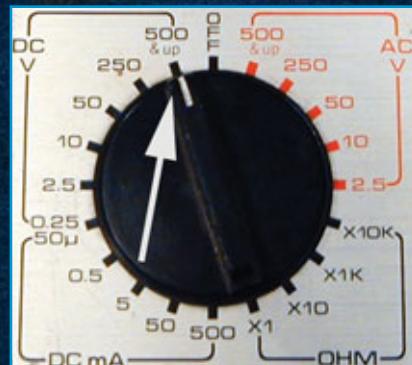
*Looking at the needle position on the red scale in photograph 18, what does it read? It is a little past the "2" but not by much. Earlier when we*



**11. The needle is in the same position as before. But the value of the reading is different.**

looked at the "50" DCV scale, the value of each thin line that was between the two thick lines was equal to "1". If we were using the "50" scale this time, the thin red lines would also be equal to "1". However we are using the "10" scale. So what is each red line worth?

To figure this out, you just have to think a little. The two thick red lines are below the "2" and the "4". If we go half way between the "2" and "4" there is a long thin red line. Because it is half way between the numbers "2" and "4", the long thin line is equal to "3". That was the easy part. Now look between the "2" and the "3". There are four thin red lines. Each thin red line is equal to ".2" or ".2/10" (two tenths).



**12. With the selector switch is set to 500, which scale do you use?**

If you counted one thin red line to the right of the thick one that is under the "2", you would have "2.2" or "2 and 2/10" (two and two tenths). Since the needle is half way between the thick line and the first thin line, it is half of "2/10" (two tenths), or equal to "1/10" (one tenth). So the actual reading of the needle is "2.1" or "2 and 1/10" (two and one tenth). We should do one more just to be sure you got it.

We will still use the "10" selector position like we did in the last example. So what part of the display will we use? That should be easy. We use the red AC portion of the display

## Safe Opening Volumes 1, 2, 5



These are the classic safe books you will need to open most any safe easily and professionally.

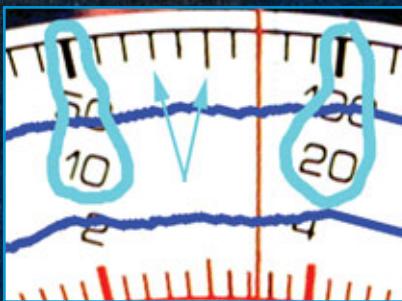
- Volume 1 - Modern Safes
- Volume 2 - Modern Safes
- Volume 5 - Very Recent Safes

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**13. The 50 scale is used. Just add a zero to the reading to get the correct answer.**



**14. Here is a close up of the new reading.**



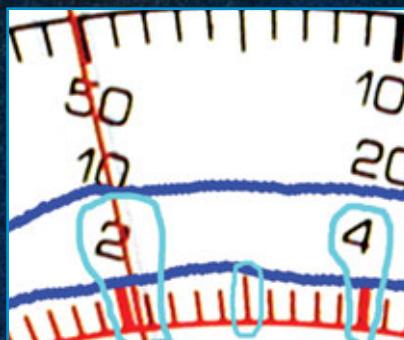
**15. Now the selector is set to 10 ACV.**



**16. To read ACV you must use the red part of the display.**



**17. You still use the black numbers, but you must use the red lines.**



**18. Here is a close up of the ACV reading.**



**19. For this new reading, the same part of the scale is used.**



**20. To make things easy, black out all of the parts of the scale that are not used in your mind.**



**21. Here is a close up of the scale.**



**22. This is a special scale for reading 2.5 volts AC only.**

and the number scale that ends in "10". (*See photograph 19.*) Don't pay any attention to the rest of the display. Here is a trick. Just kind of mentally black out everything on the display except the part you are using.

I don't like to make ugly pictures, but I think I need to this time. *Photograph 20,* is an example of what you should be looking at with the selector switch set at "10" on the ACV section. I have blacked out everything that is not used for this reading, kind of like what I said to do in your mind. If you do this every time you take a measurement, you will find that things will be a lot simpler.

A close up of the display clearly shows the needle half way between the long thin red line and the thick red line that has the "4" above it. (*See photograph 21.*) We need to figure out the value of the long thin line between the two thick red lines. Just like before, it has a value of "3". Since the needle is halfway between the "3" and "4", our reading is "3.5" or "3 and 1/2" (three and one half).

If you would prefer to count each thin line between the "3" and "4", that is fine too. Just like earlier, each thin red line is equal to ".2". Two and a half red lines, times ".2" equals ".5". Add the ".5" to "3" and you still get "3.5".

There is one more scale to look at in the ACV area. It is a scale set up specifically for "2.5" volts AC. (*See photograph 22.*) Not all analogue multimeters will have the same displays, but you will figure them out the same way. Since this display has a "2.5" scale that is in red, it is only used while in the "2.5" ACV setting.

These types of readings are about the toughest you will run into with an analogue multimeter. I picked something tough because easy doesn't teach you anything. I know it took several steps to get the answer, but don't forget the basics. The color that the selector switch is pointing to, tells you which color scale to use. The number that the selector switch is pointing to, tells you which set of numbers or scale you need to use to read the correct answer. Once you know which part of the display to use for your reading, you can ignore the rest of the display.

Next month I will cover resistance measurements with an analogue multimeter and how to calibrate the multimeter. See you next time. **TNL**

# Beginner's Corner

## M.A.G.'s Metal Solutions



**1. A split door around the latch is a result of a kick-in attack.**



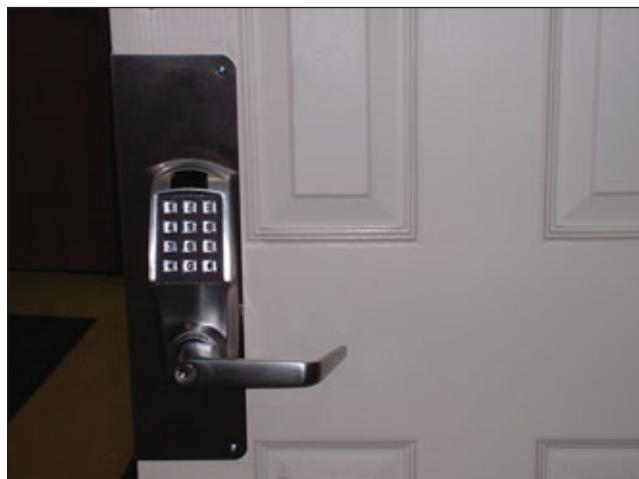
**2. A Door Reinforcer strengthens the weakened area and conceals the scar.**



**3. What do you do to conceal existing holes not needed?**

Whether the job requires modification, retrofit, or just the finishing touches, many of the answers come from one of the earth's oldest resources, metal.

When replacing the door is not in the budget, or you would like the piece of mind of having more protection against forced entry, a Door Reinforcer is the solution. The Door Reinforcer is a metal base product that provides extra security against a kick-in and repairs a door after it has been damaged. (See photograph 1.) Once a door is split around the latch area, there is little you can do to repair it besides install a Door Reinforcer. It not only reinforces the weakened area making it stronger



**4. A Door Reinforcer used to conceal holes for a retrofit application.**

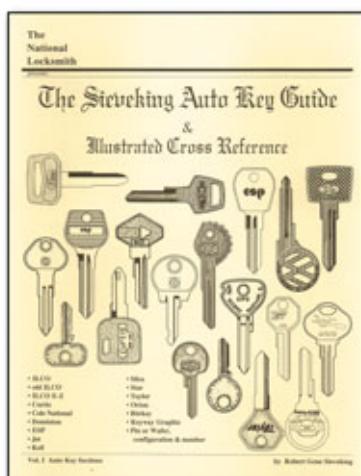
than ever, it conceals the scar, adding a polished beauty to a once ugly sight, and is considerably less expensive and faster to do, than replacing the door. (*See photograph 2.*)

With locksets continuing to adapt to today's technology and design, the need to retrofit the existing door to accommodate a new lock is becoming a common procedure. (*See photograph 3.*) One such example is converting from a standard cylindrical knob lock and deadbolt to a Kaba Ilco push-button lever lock. (*See photograph 4.*)



**5. Kick marks at the bottom of the door.**

## Sieveking Auto Key Guide



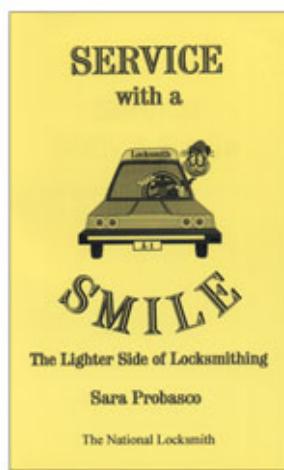
The Sieveking Auto Key Guide lists over 2,600 automotive and motorcycle keyways, covering makes from Acura to Zundapp, and listing fourteen popular key manufacturer numbers.

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#AK - 1



## Service with a Smile



To tickle the funnybone of anyone in a service oriented business.

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#SWS





**6. Paw prints on the side.**



**7. A brass kick plate.**

All M.A.G. Door Reinforcers are made in the USA from solid material that will match many of today's modern lock finishes.

**Door Reinforcer Installation:**

1. Remove the existing lockset
2. Clean up any splintered wood or bent metal
3. Slide Door Reinforcer over lock cut-out
4. Re-install lockset

**Tip:** M.A.G. Door Reinforcers can also be used as templates for installation of locksets as well.

How often do you see a beautiful door deteriorate from repetitive use? Kick marks at the bottom of the door (*see photograph 5*) or paw prints on the side (*see photograph 6*) are common unsightly occurrences.

Another metal base solution is the new or retrofit installation of kick and push plates. Whether it is fixing a door that has not been protected, or completing a new installation with preventative accessories, you will find your best result can be as simple as a metal application. A brass kick plate will hide those unsightly shoe marks and add a lasting beauty to the door. (*See photograph 7.*)

All M.A.G. kickplates and push plates are made in the USA from solid material that will match many of the standard door trim finishes. (*See photograph 8.*)

So remember, whether it is before the wear or after the tear, think metal for your solution. They are easy to install, inexpensive, and are available to match almost any standard hardware finish.

*For more information on M.A.G. products contact them at: (800) 624-9942 or (714) 891-5100; Fax: (714) 892-6845; E-mail: mageng@mindspring.com; Web: www.magsecurity.com.*

**8. A brass push plate.**

TNL

# The Lighter Side

The Wild About Harry



*by Sara Probasco*

**D**oes your life, like mine, run according to a yearly month-at-a-glance calendar book? Nearly everywhere I go, it goes, and when time comes to start afresh on a new book, I file the old one away as a sort of diary of things past. One of our insurance agents got me started back in the dark ages and has continued to send me a book every year. I now have a whole file drawer of them, recording decades of my past. On New Year's Day each year, I transfer important dates and other "permanent" information from the old book into the new.

"What are you doing?" Don asked, watching me making entries in my calendar book.

"Writing all the birthdays in my calendar book, so I won't forget anyone this year. You know, I forget, from year to year, how many holidays there are."

"Yeah. By the time we get over New Year's it's Valentine's, then Easter, and the Fourth of July. It's always something," he replied flatly.

"That's just the tip of the iceberg, dear heart. In addition to New Year's we also have Martin Luther King Day, in January. Then, in February, there's Lincoln's birthday, St. Valentine's Day, the Chinese New Year, and Washington's birthday. In March, Orthodox Lent begins, and we have Ash Wednesday and St. Patrick's Day," I continued, reading the fine print on my calendar. "April brings us Palm Sunday, Good Friday, Passover, and Easter, along with Professional Secretaries Day. May contains Mother's Day and Memorial Day. And those are only the ones marked in red."

"What about May first – May Day?"

"There's nothing here about that."

Don's eyes glazed over. "I remember when school kids used to

have special athletic field-day programs and dance around a May pole weaving long colored streamers in and out, 'til they were all balled up around the base of the pole. Then they'd try to get untangled enough to unweave everything and get back to square one.

I looked at him suspiciously. "That must have been before my time."

"Russia's May-Day military-might parades put a squelch on it, back during the cold war."

"No doubt. At any rate, as I was saying," I continued, "June hosts Flag Day and Father's Day. July's only holiday is Independence Day, but I suppose that's enough."

"Didn't we go through all this before, a few years back?" Don asked, returning to his newspaper. "Probably. The point is, nobody ever seems to do anything about it, and the number of holidays keep increasing. Hmm. That's strange. There are still no holidays at all in August. Doesn't that strike you as peculiar?"

"Too many people go on vacation then. They wouldn't want to miss out on anything."

"Maybe. Then there's Labor Day in September and the beginning of Rosh Hashanah. In October, it's Yom Kippur, Columbus Day, United Nations Day, and Halloween. The first holiday listed in November is Election Day, which I never consider to be a holiday at all. Then there's Veteran's Day, Thanksgiving Day, and my birthday."

"That's not in there," Don said.

"Sure it is."

"Show me," Don said, rising to take a look.

"See. I just wrote it in. I wanted to see if you were paying attention," I said, smiling. "Let's see now, where was I? Oh, yes, then we wind up the year with

Chanukah and Christmas, and start all over again with the new year."

"Some list!"

"Thirty holidays, in all – not counting my birthday. Fifteen are religious observations, if you count Thanksgiving and Halloween, both of which began that way. Eleven are, for the most part, political, nine are Christian in origin, six are Jewish, two are clearly commercial in nature, and then there are the American and the Chinese New Year's observances."

"You didn't mention Mother-in-law-day or Step-grandparents'-day, or Save-the-whale-day."

"I'm happy to say, my calendar hasn't gotten around to listing such recent additions to the commercial scene, yet."

"It's still quite a list." Don returned to his newspaper.

"Wouldn't it be nice if we had a holiday when all the locksmiths in the country – or even in the world – could close shop and get away for a long weekend?" I contemplated the blank square that was August for a few minutes, before an idea took hold. "We should commandeer August for a security-related holiday."

"I heard somebody's already promoting 'Home Safety Month' in October."

"But take a look at the calendar." I pointed to the page in question. "In October, they're competing with Yom Kippur, Columbus Day, United Nations Day, and Halloween, while August," I said, flipping back two pages, "is wide open. We've already established that's when most people take off for a vacation. What better time to make them security conscious? Just think what would happen if all the locksmiths closed their stores for the same long-weekend in August and disappeared. The public might realize just how much they need us, if there wasn't a

locksmith available anywhere in the country."

"Hmmm. Didn't you talk about this idea several years ago?"

"Yeah, but nobody listened. Maybe they will now."

"You may have something there," Don admitted, laying his paper down. "We could launch a massive advertising campaign. When planning your summer vacation, remember how important a quality deadbolt can be to your home security, while you're away. Don't leave home without it."

"A lot of schools start in August. We could sponsor programs during the first week of classes, and teach children about basic security in the home," I suggested.

"They could learn about some of the greats in the lock and key industry: people like Lynus Yale and Leonard Singer," Don injected, getting into the spirit of things. "Besides that, don't overlook the commercial implications of such a promotion." Dollar signs lit his eyes. "Why not establish a nationwide network of locksmiths, like florists have done? Call it TeleLock," he said, describing a banner in the air

with his hands. "People could dial 1-800 to send security baskets filled with deadbolts, door alarms, key rings, pepper spray to friends and loved ones everywhere."

"And think of the potential for greeting cards! I love you in the morning, I love you late at night. This card is to remind you to lock up when you turn out the light."

Don stared at me a moment with a sick twist to his mouth. "We may want to work on that."

"How about this one: To discourage unwanted intrusions and to keep a thief at bay, have your present door locks all re-keyed, and install deadbolts today. Call A-1."

"Sounds like the old Burma Shave ads. Maybe something simpler, like, For birthdays or anniversaries, say 'I love you' with a gift of security from A-1 Lock & Key?"

Ignoring him, I allowed my creative mind to pursue other prospects.

"I can see all kinds of possibilities. We could encourage everyone to wear little locks and keys on chains around their necks or as earrings or lapel pins. There's potential for a whole new branch of the industry."

"A parade!" Don said excitedly. "We'd have to have a parade, with floats, and bands, and huge balloons. We could even crown a beauty queen Miss New Key of the Year."

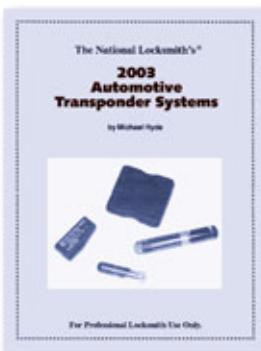
Continuing to contemplate various aspects of the idea, we each drifted off in silence. Suddenly, I was brought back to reality.

"There is one problem," I said. "What are the chances of locksmiths across the country participating? A lot of them around here don't even show up for the annual association party where there's free food. Can you imagine the problems involved in trying to organize nationwide participation in a week-end shut-down?"

"That's no problem," Don said. "You just send out notices to all the locksmiths that on such-and-such a week-end a delegate from their area locksmith association will be dropping by to sign them up to serve on a committee and pick up their donation. They'll close up shop and disappear so fast, folks will think they're Harry Potter!"

TNL

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#TS - 2003

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#TIPS - 2

# Pin Kit Upgrade

by  
**Dale W. Libby, CMS**



I am like many working safe-crackers, in that I am also a licensed and working locksmith. Thus, not only do I have to carry safecracking equipment, I also have to have a full line of locks, locksmithing tools, and pin kits. I have made a modification to my basic .005 and .003 thousandths pin kits that may help you work faster and easier.

Before going into the meat of the article, I would like to tell you that there are two basic types of locksmiths. I am the second type. The first would be of an obsessive, compulsive

nature. The second type would be more free and easy with his ways of dealing with the problems of locksmithing and safecracking. A perfect blend of both types is what most people are, and I believe is best. Now let us explore this mania of pin kits.

First and foremost, the .005-inch pin kit came into being. This is the one I have used the most and have keyed from with over 40-years of learned habits and finger placements. Next came the .003-inch pin kits to make the cut keys turn even easier, but a new numbering system of .003

increments had to be learned. In addition to these kits there were specialty kits for pinning a specific type of lock, say for instance Sargent, Russwin, or Corbin. If you had a big job with only one type of cylinder, you would either use a specialty kit or make one up of your own. The .003-inch pin kits also made you stock a larger number of pins than the old .005-inch kits did.

I still use the .005 kits. Old 40-year habits die hard.

Here is one distinguishing difference between the two types of locksmiths. Say for example, you accidentally tipped over one of your larger pinning kits. What would you do? I would sweep or vacuum up all the pins and throw them away and buy new packaged pins to put into the kit. Sometimes, buying all new pins for an empty pinning kit is more expensive than buying a new, fully loaded kit. Sorting a box of mixed up pins is not for me.

The second person to have this tragedy happen might gather up all the pins, sort them by color, and then sort them by size. In my opinion this is a colossal waste of time and energy. I have seen locksmiths do this very thing. What have they saved? A few bucks, while they wasted time and exhausted their eyesight. Perhaps this might be a learning experience for younger locksmiths, but it is a great time and energy waster.

Pin kits have progressed over the years. A standard .005 pin kit is shown in *photograph 1*. It has bottom pins on the lengths from .165 to as long as .365. In the bottom tray (which is held locked by two removable screw bolts) there is a tray with top or master pins. These pins are used to master key a lock cylinder.



**1. Standard Color Coded .005-inch pin kit.**



**2. Bottom tray with small Master Pins first.**



### 3. Modified bottom row numbered 0 – 9.

The first modification I made to my first .005-inch pin kit was to reverse the bottom pin tray, put the pulls and the tray stops on the opposite sides of the wooden tray. When I pulled out the tray, the smaller pins were the first ones out. These are the one's that I used mostly. The only minor problem was that the numbers for the pins were upside down. This was a small inconvenience to pay for having the smaller pins available without having to pull the bottom tray completely out.

*Photograph 2*, shows the bottom tray on a newer ESP Kolor Koded .005 pin kit. When you pull out this tray, it does start with the smaller master pins and even has a place for springs. This is a vast improvement over the way it was before. Above the bottom tray can be seen the last row of pins tray cups on the upper tray. They are empty. I vacuumed all these pins out of the holders for my idea to work.

I noticed many years ago that the pin lengths of .315 to .365 were not used much by me. I know that some Russwin, Corbin, Sargent Special, and even some Weiser locks used these longer pins, but I avoided using them in setting up my systems and my change keys. A deeper cut on a key weakens that key so I tend to avoid using pins longer than .300-inch or Schalge #9 depths. If I ever need a long bottom pin, I can always use a top and bottom pin combination to key.

Aha, an idea popped into my head. This initiative can be used on both the .003 and .005 pin kits. I removed all the pins from the bottom row of my .005-inch pin kit and threw them away. I then put labels from 0 to 9 across the bottom

of the pin kit and filled them in with Schalge pins corresponding to the numbered wooden cups. 0 = .165, 1 = .180 etc. through 9 = .300. I now had a specialty pin kit combined with my regular pin kit. Now I could key Schalge cylinders quicker and easier without having the added burden of a separate Schalge pin kit to contend with.

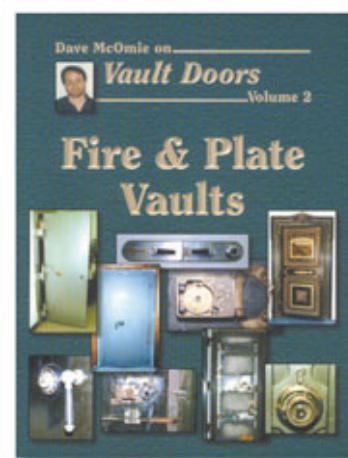
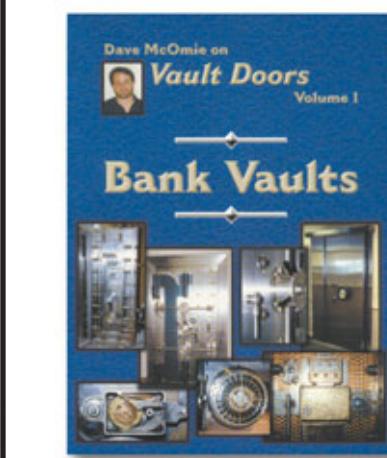
An added bonus was also having the regular pin kit available to key other locks. The .003-inch pin kit

that I have has about 21 pin cups across the bottom. In this kit I have my Schalge pins and my Kwikset pins in ascending order across the bottom. Another reason that I use the .005 pin kit is that the pin cups are larger and it is easier to get my fingers in to grab one pin.

I have always picked up pins with my fat fingers. Most customers are amazed that I can do this. I have seen other locksmiths that only use pin tweezers to pick up pins. There is really no wrong or right way to do this. I just find it faster and easier (for me) to use my fingers, and my modified pin 'specialty' kit.

**M**ost locksmiths I have shown this simple modification to, make a similar adjustment to one or all their kits. I used Schalge for my example, for that is the key cylinder that I key most, for both commercial and residential customers in the northern part of Illinois that I work and live in. In your part of the country other named key systems may be more popular. So, modify your pin kits and make your keying easier, faster, and more productive. Modify and Prosper. **TNL**

## Dave McOmie on Vault Doors Vol. 1 & 2



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# THE CASH STATION

by Mark Daniel

## LeFebure EL 1000

### SPEC SHEET:

**Depository Manufacturer:**  
LeFebure

**Depository Model #:**  
EL 1000

**Safe Manufactured by:**  
LeFebure

**Safe Size:**  
19-1/2" High by 14" Wide

**Handle Type:**  
Locking T-Handle

**Handle Location:**  
9-1/2" Down from top door & 2-5/8" Left from  
opening edge.

**Handle Rotation:**  
Counter-Clockwise to open

**Dial Location:**  
4-5/8" Down from top of door & 7" Left of opening  
edge.

**Number of Door Locking Bolts:**  
3

**Door Locking Bolt :**

Top bolt is 3-5/8" Left of opening edge, Bottom bolt  
is 1-5/8" left of opening edge and the center bolt is  
rotating & is on center with the T-Handle.

**Door Locking Bolt Diameter:**  
1/4"

**Door Thickness to Bolt Center:**  
1-1/4"

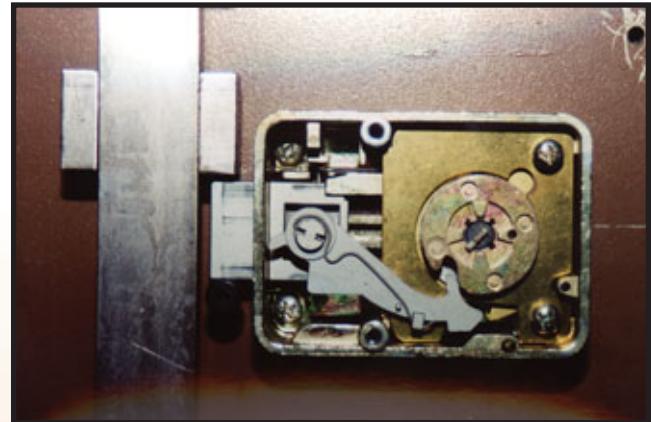
**Door Thickness to Lock Case:**  
1/2"

**Door Thickness to Back of Lock:**  
1-5/8"





## LeFabure El 1000



**Combination Lock Opening Procedures:**  
4 times left to first number. 3 times right to second number. 2 times left to third number. 1 time right to open.

**Combination Lock Drill Point:**  
7/8" out from dial center at 47. Align wheel gates at the fence lever. Note: Lower dial ring screw hole is drilled all the way through to the lock case. Makes a nice drill spot.

**Combination Lock Relock Trigger Type:**  
Spring wire. Activated when the lock cover is removed or punched.

**Combination Lock Changing Procedures:**  
Dial the existing combination to the opening index. Insert change key into back of lock and turn counter-clockwise one half turn. Dial new combination to opening index using same procedure as opening lock. Turn change key clockwise one half turn and remove. Test combination.

**External Relock Device Type:**  
None

**External Relock Device Drill Point:**  
N/A

**Time Lock Manufacturer:**  
N/A

**Special Notes:**  
The lower bolt screw comes loose and falls out, preventing the retraction of the bolt. Since this is a wall mounted depository, and extends out from the wall about 6". A good sharp blow on the bottom of the safe, in the area of the lower bolt, will move the bolt enough to pull open the door. Don't forget to put some thread locking compound on the bolt screws, it will prevent an unwanted comeback.

**Combination Lock Type:**

LaGard 3330

**Combination Lock UL Rating:**

Group 2

**Combination Lock Case Thickness:**

1-1/8"

**Number of Wheels:**

3

**Driver Location:**

Rear

**Combination Lock Handing:**

Left Hand (L.H.)

**Combination Driver Location:**

Rear

**Drop-In Location:**

48

**Forbidden Zone:**

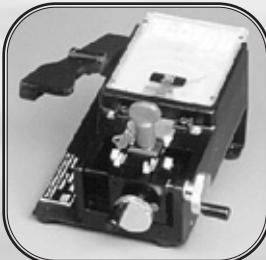
0 - 20

# TECHNI TIPS

## YEAR-END PRIZES



**Grand Prize**  
Silca Bravo Duplicator



**1st Prize**  
HPC's 1200PCH  
Punch Machine



**2nd Prize**  
Mas Hamilton's  
PowerLever 2000



**3rd Prize**  
Curtis 2200 Duplicator



**4th Prize**  
SDC Magnetic Lock,  
Keypad and Exit Switch



**5th Prize**  
Securitron 12-Volt Unlatch Plug in  
Trans & Touchpad Retail Value \$650



**6th Prize**  
LaGard "SmartGard"



**7th Prize**  
Detex Advantex



**8th Prize**  
Arrow 400 Series Alarmed  
Exit Device & S-75 Mounting  
Plate Kit for Narrow Stile  
Aluminum Doors



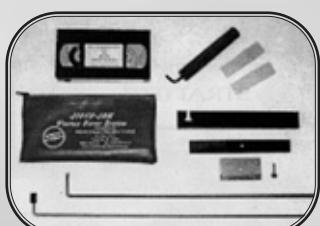
**9th Prize**  
\$500 in BWD Products



**10th Prize**  
\$500 in ASP Auto Locks



**11th Prize**  
\$500 in Strattec Auto Products



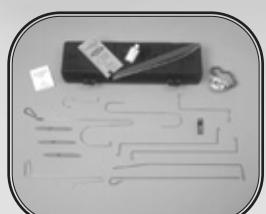
**12th Prize**  
Tech-Train "Jiffy Jack"



**13th Prize**  
Sargent & Greenleaf 6120  
Electronic Safe Lock



**14th Prize**  
High Tech Tools  
2000 Pro Set



**15th Prize**  
Slide Lock's Complete Z-Tool System



**16th Prize**

ESP Products Sampler



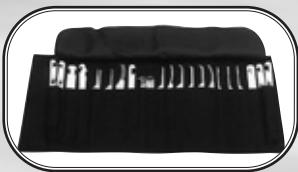
**17th Prize**

Major Manufacturing's  
HIT-111 Drill Guide



**18th Prize**

Abus Padlock's Marine  
Padlock Display (\$120 Retail)



**19th Prize**

MBA USA, Inc.  
Falle Pick Set



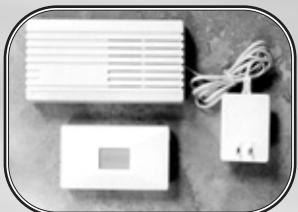
**20th Prize**

Baxter JV-1 & JV-5  
Code Books



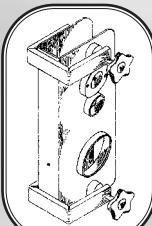
**21st Prize**

Sieveking Products  
Squeeze Play



**22nd Prize**

Rodann's RV500 Wireless  
Door Annunciator System



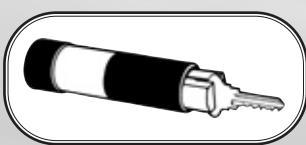
**23rd Prize**

A-1 Security Manufacturing  
Installation Jig



**24th Prize**

Keedex Sampler



**25th Prize**

Framon  
Impressioning  
Handle



**26th Prize**

Gator Tool Multi-Purpose  
Facecap Tool

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Awarded Each  
Month!**

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- **Wedgeco™ Key Extractor Kit**
- **Strattec Racing Jacket**
- **HPC Air Wedge™**
- **Sargent And Greenleaf 4400 Series Safe Deposit Box Lock**
- **A-1 Security Products**
- **ILCO Key Blanks (100 Blanks)**
- **Keedex "SPIN OUT"**
- **Screwdriver**
- **Tech Train Training Video**
- **Sieveking Products Gm E-Z Wheel Puller**
- **Major Manufacturing Products**
- **Slide Lock's "Z" Tool Opening Set**
- **The Sieveking Auto Key Guide**
- **Jet Key Blanks (100 Blanks)**
- **High Tech Tools**
- **LaGard Combo Guard**

**Send in your tips, and win!**

**How To Enter**

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,  
**The National Locksmith**  
1533 Burgundy Parkway  
Streamwood, IL 60107-1861

Or send your tips via  
E-mail to: Natllock@aol.com

**Rules & Regulations**

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number and e-mail address. When sending tips via e-mail make sure to include complete address and phone.

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Prizes are arranged according to suggested retail price value.

**Tips Start  
on Next Page**



**BWD KWIKIT WINNER:  
Ford Five Pin  
Ignition Trick**

Just a reminder about the problem that Ford 5 pin ignition locks have with the soft brass key buzzer breaking and jamming the keyway. Most of the time they can be extracted with picks or broken key removal tools.

In case you can't get the broken piece out, you can try grinding back the tip of the key and using it to turn the ignition for removal and replacement. Make sure you leave enough of an angle on the tip of the key to allow it to slide in easily.

You may have to first manipulate the broken piece of the buzzer the rest of the way down the keyway into the back of the lock and tap it flat by inserting a keyblank and tapping on the bow of the key with a small hammer. If that doesn't work (like the one I recently encountered) another alternative is to grind the tip of a keyblank back and then prep it for impressioning and impression a key to turn the cylinder. This lock had two problems: the customer's key was worn, and he had difficulty getting it to work even before the key buzzer broke.

As usual, I found this out after spending some time on the lock. Remember, a thorough questioning of the customer about the events leading up to a problem can sometimes reveal valuable information to the diagnosis of the problem, especially if there are multiple problems involved in the lock failure.



**William Kimbley  
California**

**WEDGEKO KEY  
EXTRACTOR  
WINNER:**

**Pin Torx Trick**

I was about 35 miles from the shop and needed a Pin-Torx bit to remove a security screw in a lock. As luck would have it, I had mislaid my Pin-Torx bit somewhere and had only standard Torx bits in my toolbox.

I tried drilling a hole in the end of a Torx bit, but that proved unsatisfactory. Then I decided to cut a slot across the face of the bit wide enough and deep enough to accommodate the pin. It worked like a charm and saved me a long round-trip back to town.

**Clarence White  
Illinois**

**104 • Visit [www.TheNationalLocksmith.com](http://www.TheNationalLocksmith.com)**

## A Few Words From Jake...

I've been known, on occasion, to share a tip of mine with you all. It's only fair, since so many of you folks have been willing to share your tips with me and all those who read this column.

This month I'm going to give you two tips. The first one is that I have invented, and am producing a patent pending universal, retrofittable toilet stall latch. Say, what? Yes, you read it right. Let me ask you a question. I don't know if you have ever been asked to, or have tried to repair or replace a toilet stall locking latch, but if you have you know the difficulty in trying to find a replacement. If you're experience has been anything like mine, you can't do it. Not a retrofit anyway. If you can identify the manufacturer of the hardware, you stand a pretty good chance of getting what you need. Otherwise, you can put a hook and eye on it or a small slide bolt. Neither of which is satisfactory.

Well, I have invented an honest-to-goodness, universal, retrofittable toilet stall latch that will fit virtually any configuration of toilet stall doors! It's called Johnny Latch by Jake, and you can learn all about it at: <http://www.johnnyletch.com>.

My second tip is almost too simple to mention.

Have you ever gone up to a door with a panic device on it and found that not only has the device been mounted and remounted or replaced, but there are all sorts of holes drilled in the door (especially metal doors) where the mounting hardware has been moved? The holes are unsightly and make the whole installation or repair look unprofessional.

If the holes are just screw holes, drill them out to accept a 3/16" PopRivit® and put a rivet in the hole to "cover" it. If the hole is a bolt hole, drill the hole all the way through the door and put a "sex" bolt in the hole with a finish washer on the inside. Some holes in aluminum stile doors can be repaired using a 1/4-20 screws or bolts with a chrome finish washer.

Whatever you do, it makes the job look a little neater and a lot more professional.

See y'all next month.



**by Jake  
Jakubowski**



**STRATTEC WINNER:  
Cylinder Removal  
Tool**

On a recent lockout, I wanted to remove a Medeco cylinder from a Segal 667 lock. I figured that I could remove the cylinder ring, grip the cylinder with my Vise-Grips and

rock the cylinder back and forth until the retaining screws broke. However, when I removed the cylinder ring, I found that the cylinder was flush against the lock and there was not enough room for me to grab the cylinder with my Vise-Grips.

After finally getting the door open, I decided to see if there was not an easier way to force a cylinder out of auxiliary style locks in situations where normal procedures would not work. I came up with the following device, which I think works well and is easy to fabricate.

I had a 10mm socket welded to a 2-1/8" flat washer. (See illustration A.) Before welding the washer to the socket, I drilled two holes in the washer (use any mortise or deadbolt cylinder to determine the location of



**Illustration A.**

those holes) that would accept self-tapping screws.

Now, all I need to do is attach the flat washer to the face of a cylinder with two self-tapping screws, put a ratchet (or breaker bar) on the socket and rock the cylinder back and forth until the retaining screws break. If you need more leverage, you can use a small length of pipe on the handle of the ratchet.

*Michael Maldonado  
New York*



**HPC WINNER:  
Weiser Knob Trick**

I came across an old Weiser knoblock that when I picked the lock, it would not open. I hadn't seen one of these in a while so it took me a couple of minutes to remember this trick.

After you pick the lock (it only turns clockwise) you have to turn the cylinder almost back to the locked position. Slide a straight pick or wire into the center of the keyway until you feel the spring loaded rod and push it in as you turn the cylinder clockwise to open.

This doesn't unlock the knob, it only retracts the deadlatch, so you have to push, or pull, the door as you do this. These locks are designed so that the key tip pushes the center rod back. If you are picking the lock, the rod does not get pushed back and it won't retract the deadlatch.

You also have to be careful when picking. My rake pick kept getting trapped in the back of the cylinder and I had to push the rod in with a straight pick to release it.

*Marvin Durant  
North Carolina*



**SARGENT &  
GREENLEAF  
WINNER:  
Master Padlock  
Code**

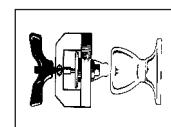
A customer needed the combination for a Master padlock. This was the style with a key bypass and I could not find a code for it. I picked the bypass cylinder on the back to open the lock.

I then held the locking dog back so I could get a better view of the wheels. With some light, I could see the gate on the wheels at about the 10 o'clock position. I dialed the gates to that point and marked down the number on the dial. I had another

similar padlock with the back off and calculated the proper numbers for opening. You subtract 11 from the previous numbers found and the lock should open.

Depending on your view of the wheels, you may have to adjust 1 number up or down. If you can only see two wheels, these will most likely be the first two numbers. You can find the last number by dialing one number at a time, after dialing the first two properly.

*Jim Pakkala  
Michigan*



**A-1 SECURITY  
PRODUCTS  
WINNER:  
Rekeying a  
Stanley  
Keylocking Hasp**

I have a couple of simple tools that I made to aid in rekeying the Stanley Keylocking Hasp. The tools assist me in removing the plug from the cylinder to expedite rekeying.

As you can see in *illustration B*, I make a small hook in a straightened paper clip and then make a larger loop at the other end to act as a handle for turning and

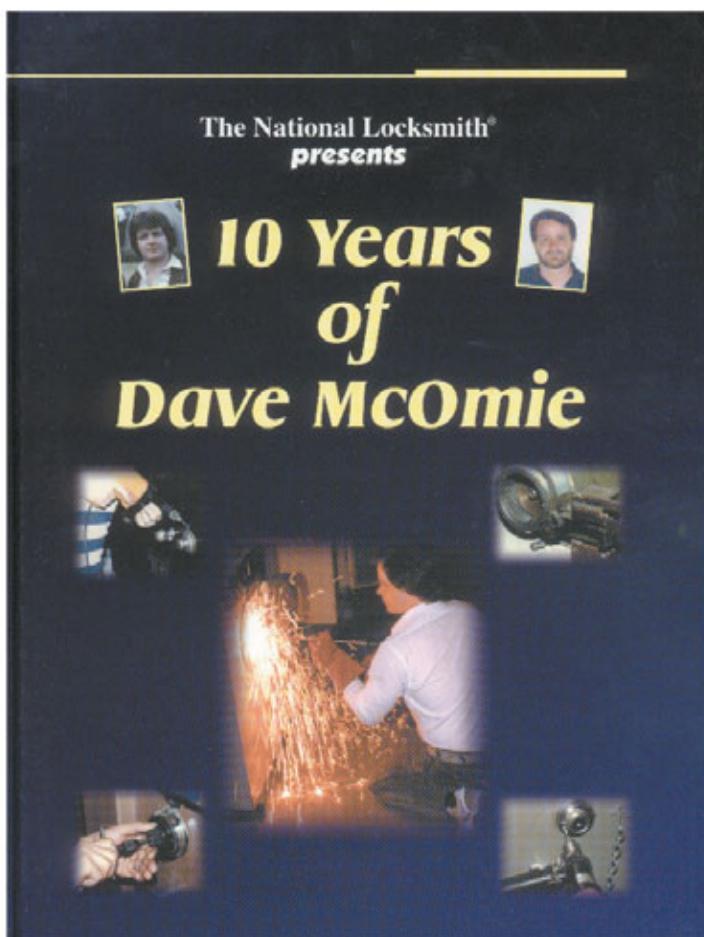
# Wafer Lock Reading



Easy to learn.  
No Codes needed.

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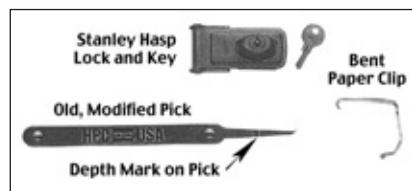
# 10 Years of Dave McOmie



Every single National Locksmith article by  
Dave McOmie from August 1986  
through August 1996  
under one cover!

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#DM - 10



**Illustration B.**

pulling. I used a broken HPC pick, with the end ground as shown to enable it to grab the retaining wafer and manipulate it so the plug can be removed.

Insert the pick 5/8" into the plug, with the hook turned to the left and "work" the retainer wafer down to the release position. Then, insert the paper clip, place the hook behind the plug and pull.

I found it helps expedite matters if you mark the pick as shown, 5/8" back from the tip.

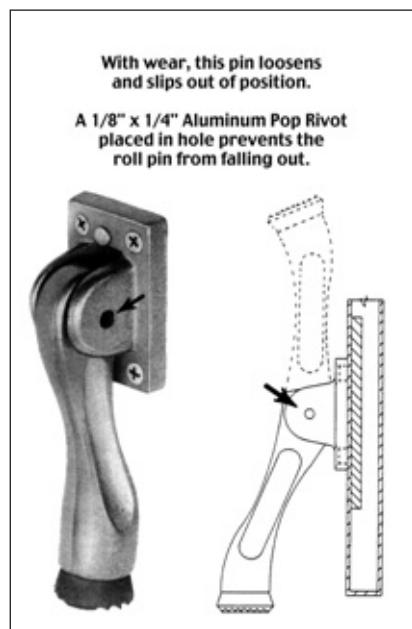
It may take a time or two to get the hang of removing these plugs, but it really is easy to do.

*Todd A. Phillips  
Michigan*



**ILCO KEY BLANKS  
WINNER:  
Kick Down Door  
Holder Fix**

I work for a school district in New York State and we have had a chronic problem with kick down door holders falling apart after a short while on the door. Of course, those holders get a lot of use and abuse, but it seems that after a while, the roll pin that holds the leg of the



**Illustration C.**

holder in the bracket loosens and falls out which allows the leg to fall off and then get lost.

To rectify the problem, I place a 1/8" x 1/4" Pop-Rivit in the same hole as the roll pin. (*See illustration C.*) I place one of these rivets on both sides of the kick down holder. The rivet prevents the roll pin from coming out regardless of how loose it may become.

*Jeffrey Sibley, CPL  
New York*

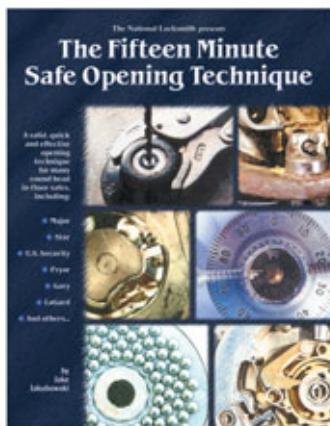
**KEEDEX WINNER:**

**Deadbolt Drilling Jig**

Having been faced with the necessity to drill a deadbolt off the door because of a failed bolt latching mechanism, I developed this simple to make jig to aid in quickly removing broken deadbolts.



## 15 Minute Safe Opening



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I used an old Schlage B160 deadbolt housing. Where the retaining screws are threaded into the outside cylinder housing, I simply used a 5/32" bit to completely drill through the face of the old cylinder. Then I removed the scalp and the plug.

Now when I encounter a deadbolt that requires drilling, I simply mount my homemade jig face-to-face with the broken deadbolt, use an awl to scribe my drill site and then drill away.

By removing the plug from the cylinder that I'm going to use as a jig, it allows me to fit the jig flat against the cylinder that I want to drill. I've found this effective on Schlage, Arrow and Kwikset.

*Mike Moriarity  
Florida*

**Editor's Note:** Mike, thanks for your tip. Here's another one for you to consider. Use the retaining plate from a rim cylinder and place the plate face to face with the defective deadbolt or other rim cylinder. Simply start your drill marks where the rim cylinder mounting screws would normally pass through the plate. Use a 1/4" drill to allow for any "wiggle" room you might need to shear the mounting screws.



**TECH-TRAIN  
TRAINING VIDEO**

**WINNER:  
Valiant Key  
Origination**

A customer brought in a 1964 Plymouth Valiant with a sidebar trunk lock to have a key made. I thought about impressioning or going through the back seat because it had no glove compartment lock. Upon researching the specifications, I found that it was like the older GM sidebar locks with the same spacing and only a few thousandths difference in depth. I checked out the keyway profiles and found that it was similar to the GM "H" keyway.

I decided to use my GM tryout keys and in less than ten minutes I had the trunk open. All I had to do was code cut a key and I was finished.

*Robert Coleman  
Illinois*



**SIEVEKING  
PRODUCTS GM E-  
Z WHEEL PULLER**  
**WINNER:  
Keeping Track of  
the Oddballs**

I've been locksmithing for about twenty-five years now, and it seems as if a week can't go by without someone bringing me in something that I've never seen before.

A long time ago, I decided to start keeping track of all those oddball items and have found that I keep referring back to my oddball file to find a solution to a problem a customer has just laid on my service counter.

I purchased a binder and a packet of business card holder pages. These pages have ten plastic pockets that will hold twenty business cards back-to-back (in my case, front-to-front).

Every time I originate, duplicate or see an odd or unusual item, I write down the information on the back of a business card and slip it into my binder. The card may contain blanks used, spacing, depths, configuration or any modifications I had to make.

Occasionally, I will even make an extra blank and slip it into the pocket with the card. This little trick has come in handy many, many times. I have made a key for a Kraco Electronic Nightstick on at least three occasions and simply duped the key from the one in my oddball file.

If I come across an unusual or different lock, I write down whatever information I have. That way, I'm at least aware that the lock exists.

My Oddball Binder has been a great asset to me over the years as one of my most utilized reference guides.

*Elain Willhoite  
California*



**MAJOR  
MANUFACTURING  
PRODUCTS**  
**WINNER:  
Vent Window  
Opening Tool**

If you remove the bail from the master cylinder in an older salvaged car, you will find that the bail is perfectly formed to open vent windows. One end will work on the left side and the other end will open the right side, by releasing the button and turning the handle at the same time.

*Marvin Golden*

**TNL**

# The 2001 HONDA CBR1100XX



by  
John Blankenship

Part 2



Last month we covered the gas cap lock and ignition lock. This month we conclude with the seat lock and spec information.

## Seat Lock



**1. To disassemble the seat lock, pick it 90 degrees clockwise and hold it while you lift the rear of the seat. Have a small screwdriver ready to finish turning the lock, because you are turning against spring pressure. It will return to the locked position when released.**



**2. The rear of the seat has been lifted up. Now pull it toward the rear of the motorcycle and remove it. Make sure the seat lock and latch are working properly before putting the seat back on, or you will be unable to remove it again without damage.**



**3. Use a 5mm hex key to remove the front bolt from the rear fairing. Then remove its counterpart on the other side of the motorcycle. You can see the bolts you are removing from the rear fairing in photograph 1.**



**4. Use a 6mm hex key to remove the center bolt from the rear fairing. Then remove its counterpart on the other side of the motorcycle.**

The National Locksmith

Guide to:

## *Antique Padlocks*



by Jack Roberts, CML

# Antique Padlocks

Finally there is a book to give you all the information you need about old interesting locks.

[CLICK HERE TO LEARN MORE](#)

#PAD - 1





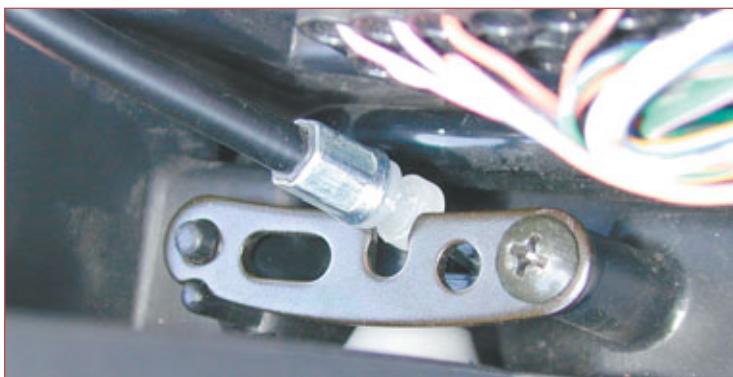
**5. Use a 6mm hex key to remove the larger bolt from the grab handle. Pull the rubber cover off the smaller bolt and use a 5mm hex key to remove it from the grab handle. Then remove their counterparts from the other side of the motorcycle. You can now remove the grab handle and also pull the rear fairing toward the rear of the motorcycle and remove it.**



**6. The rear fairing has been removed from the motorcycle.**



**7. Remove the two 10mm bolts that hold the taillight on. Then move the taillight to the right side of the motorcycle to get it out of the way. It is not necessary to disconnect the wiring.**



**8. This photograph shows the area at the rear of the seat lock. Pop the end of the seat latch cable housing out of its mounting bracket as shown. Then remove the Phillips screw and mounting bracket.**

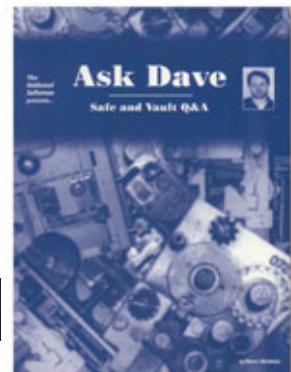
## Ask Dave

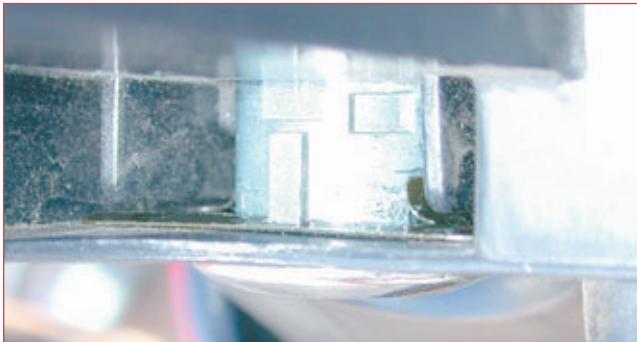
You asked. He answered. This is safe and vault Q&A with an attitude.



CLICK HERE TO LEARN MORE

#AD - 1

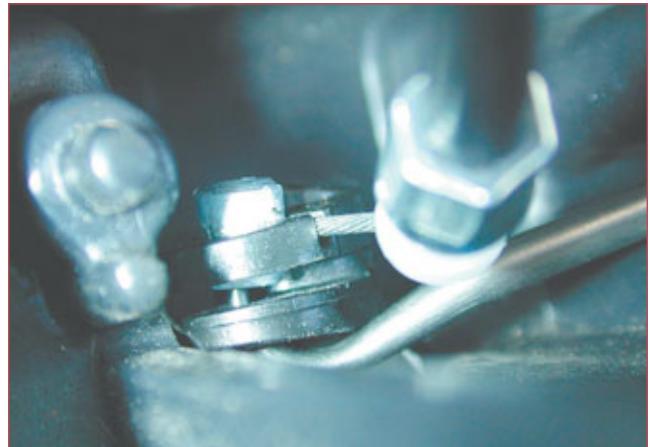




**9. We are looking down at the top of the seat lock. A clip is securing the lock and you cannot pull it out. There are two tabs on the clip that snap into two flat spots on the lock housing.**



**10. Use two awls to move the tabs outward so you can pull the lock out.**



**12. Move the seat lock cable around until it aligns with the slot in the tailpiece. Then use a hook tool to help push it out of the tailpiece. You can now pull the lock out and remove it from the motorcycle.**

**11. The lock and clip have been removed for demonstration purposes. An awl has been pushed in to move one of the tabs out. The increasing diameter of the awl will move the tab outward. It is necessary to move both tabs out to remove the lock. When replacing the lock, use the awl to push the tabs back down until they snap into place. Notice the land on top of the lock housing. Pull the lock out far enough to clear the land from its slot in the mounting hole and turn the whole lock 90 degrees counterclockwise.**

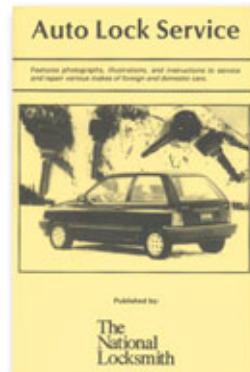
## Auto Lock Service

Covers opening and service techniques.



CLICK HERE TO LEARN MORE

#ALS - 1



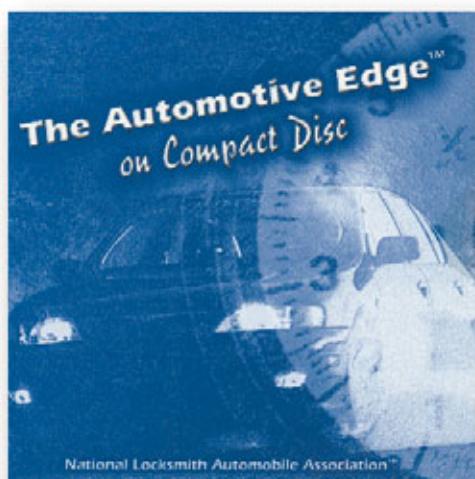


**13. The seat lock has been removed from the motorcycle. Notice that a roll pin secures the plastic tailpiece to the rear of the lock.**

**14. Insert a wire into the roll pin to keep it from collapsing. Drill a small hole next to the roll pin and then pry it out with a nail set or similar tool so you can pull the tailpiece off the rear of the lock.**



**15. The face cap has to be removed. This cap is easy to remove and replace without damage. I use a pair of spring-retumed needle nose pliers with one side ground 1/16" shorter and slightly pointed to pry up the edge of the cap. You only need to pry it up about 2/3 the way around to slide the cap off.**



## AutoEdge

This CD contains over 1,200 pages of automotive locksmith service.

[CLICK HERE TO LEARN MORE](#)

#AE - CD

**16. Now you can disassemble the lock as shown.**



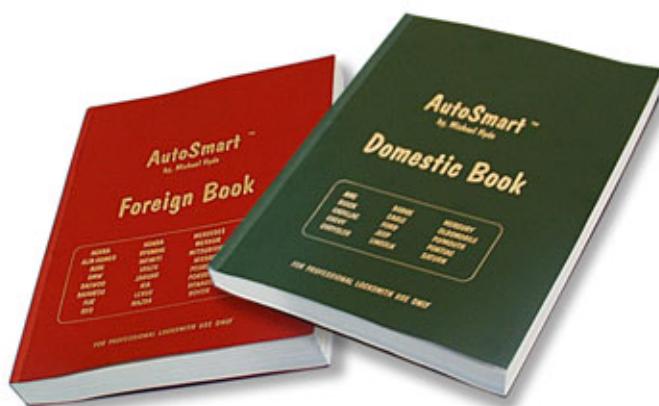
**17. The seat lock contains wafer tumblers in spaces 2-6. An X265 blank inserted into the keyway shows that the cuts are 13233. A search using key code**

**software revealed that there are only 6 codes that use those cuts in spaces 2-6. It is easy to progression the missing cuts because the first space is always a #1 depth (no cut) so you really don't have to be concerned about it; you only need to progression spaces 7-8. There are only three depths so there are only nine possible combinations to try:**

**1st try: 11, 12, 13, 23, 33; 2nd try: 21, 31, 32; 3rd try: 22**

**Use the gas cap lock for progressing these cuts and you can use one side of a blank for each try, since all of the tumblers are on the same side of the keyway in the gas cap lock.**

## AutoSmart™



With almost 900 pages these are the only books you need to service virtually **EVERY** car on the road!



[CLICK HERE TO LEARN MORE](#)



**18. I use a small ball peen hammer to crimp the facecap back on. I support the other side of the lock against a vice and vary the angle of the hammer as I slide it across the workbench into the edge of the facecap.**

### Specifications

**Codes:** J, K, L, M, N, P, Q, R, S, T00-99, U00-U39

**Blank:**

**Ilco:** X265 (HD109)

**Curtis:** HD109

**Silca:** HON63FP

**Jet:**

**HPC Card Number:** CF73

**ITL Number:** 211

**Curtis:** HD-13 cam & HD-13A carriage

**Tumbler Locations:** 1 2 3 4 5 6 7 8

Ignition	X X X X X X X X
----------	-----------------

Gas Cap	X X X X X
---------	-----------

Seat	X X X X X
------	-----------

**TNL**

**Spacing:**

1 = .098

1 = .276

2 = .197

2 = .244

3 = .295

3 = .213

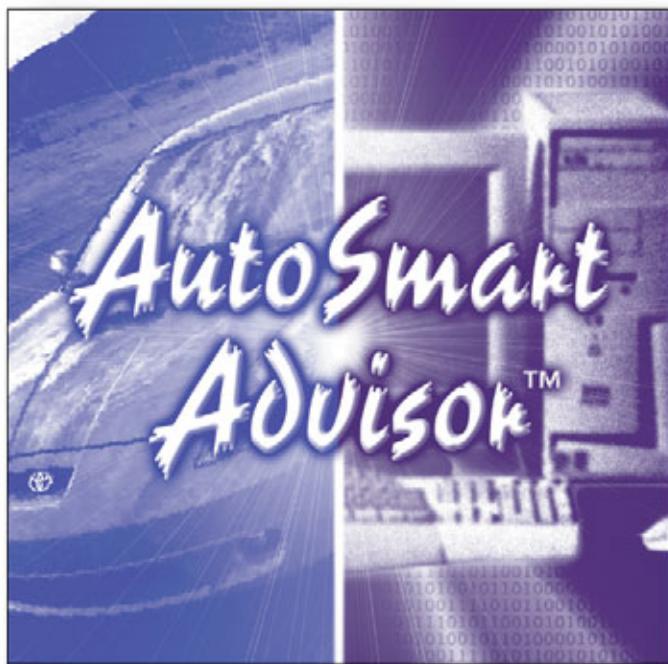
4 = .394

5 = .492

6 = .591

7 = .689

8 = .787



## AutoSmart Advisor

Contains virtually every car and part known to man up through 2000.

**CLICK HERE TO LEARN MORE**



# BUSINESS BRIEFS

## **Strattec Names New Vice-President**

Strattec Security Corporation has announced the appointment of Mr. Kris Pfaehler as Vice President, Marketing and Sales.

Mr. Pfaehler is responsible for all sales and marketing efforts for Strattec, including the company's six Product and Customer Business Teams.

## **Dugmore and Duncan**

Dugmore and Duncan now offers the revolutionary new SARGENT 11-line T-Zone lockset. The T-Zone lockset withstands extreme abuse and far exceeds ANSI/BHMA Grade 1 requirements, with numerous key systems available.



The new design eliminates lever sag, even after 2 million cycles and has a 45-degree lever rotation for full latch retraction. There are four solid seamless cast lever designs. The T-Zone lockset fits standard 161 prep-no thru bolt, retrofits bored-in locks and has 17 functions available.

For more information call: (888) DUG-MORE (384-6673). Circle 265 on Rapid Reply.

## **Access, Adams Rite, Von Duprin and Sargent**

Access Hardware Supply is offering The Rite Door® from Adams Rite Manufacturing Company, the Von Duprin Model 5100 strike and the Sargent electrified products.



**Von Duprin 5100 Strike.**



**Adam's Rite Integrated Door System**

The Rite Door is a complete door and exit device, integrated to perform flawlessly and to install quickly. All hardware, including their world-class exit device, is pre-installed in the door at Adams Rite, to assure perfect alignment and function.

Von Duprin's 5100 model strike is an easy-to-install electric strike that was created for medium duty applications, specifically to control traffic flow through interior and exterior openings in retail and commercial environments. Every strike comes standard with three separate faceplates to cover wood, hollow metal or aluminum frames.

Sargents 8200 and 10 Lines of electromechanical mortise and cylindrical locks are available in a number of configurations, to cover different functions and applications. They are well suited for high security areas. A battery-operated Keypad Mortise Lockset is also offered, capable of storing up to 99 individual codes along with the master code.

*For more info call: (800) 348-2263 or visit their web site at [www.accesshardware.com](http://www.accesshardware.com). Circle 266 on Rapid Reply.*

## **Ex-Coach Bears His Soul**

The Door and Hardware Institute (DHI) will hold its 27th Annual Convention and Exposition in Chicago, July 13-15, 2002 at Navy Pier. One of the most unforgettable events of this three-day convention will undoubtedly be the "No Huddle" Lunch on Saturday, July 13, from 11:30 a.m. to 1:30 p.m., at the Hyatt Regency Chicago during a break in DHI's education programs. The reason being: Big, Bad Mike Ditka!

To access complete details on the "No Huddle" Lunch and DHI 2002, including registration and lodging, log onto the Institute's website at: [www.dhi.org](http://www.dhi.org), or simply call DHI at: (703) 222-2010.

## **Dorma Hires Ciastko**

Dorma Group North America has hired Mari Ciastko as Architectural Products Consultant. She will work primarily with architects to develop functional and aesthetic solutions for entryways through the specification and use of door hardware, automatic and revolving doors, and glass wall systems.



**Mari Ciastko**

Mari is based in Chicago. Her office number is (312) 337-7833. For more information about Dorma, call: (800) 523-8483 or visit [www.dorma-usa.com](http://www.dorma-usa.com).

## **U.S. Lock Corporation**

Interline Brands has named Geoffrey Meyer general manager of U.S. Lock, a full service distributor of architectural, security hardware and



locksmith supplies. U.S. Lock currently has six locations nationwide serving the needs of the professional wholesale security industry. Meyer's primary responsibilities include business development, strategic planning and the profitability of the company.

TNL

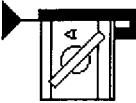
# FREE Code Cards!

## from The National Locksmith®

**COLLECT  
'EM ALL!!**

Spaces		Depths		Cutter: CW-1011		Cutter: IC #: 903					
mm	Inch	mm	Inch	Jaw: A	mm	mm	Inch				
1	2150	846	2	855	337	1	2150	846	2	855	337
2	2010	791	1	820	323	2	2010	791	1	820	323
3	1860	709	3	690	272	3	1860	709	3	690	272
4	1660	654	4	625	246	4	1660	654	4	625	246
5	1450	571				5	1450	571			
6	1310	516				6	1310	516			
7	1110	433				7	1110	433			
8	960	378				8	960	378			
9	750	295				9	750	295			
10	610	240				10	610	240			

Key Blank Mfr: **Blank #:**  
Silca TOY43AT4



**Toyota 50001-69999**

Copyright 1994 - 2001  
WH Software

**Align: Black horse shoe lip stop**

**The National Locksmith®**

**Cut Along Outside of Card and Laminate To Use**



**BONUS  
Code Card**  
For the  
**1200CMB™**

**Flip 'em  
over for  
Silca,  
Curtis,  
Framon,  
A-1  
and  
ITL specs!**

Spaces		Depths		Punch		IC #: P903	
mm	Inch	mm	Inch	Jaw: A	Series	Original	
1	2150	846	2	855	337	50000-69999	50000-69999
2	2010	791	1	820	323		
3	1860	709	3	690	272		
4	1660	654	4	625	246		
5	1450	571					
6	1310	516					
7	1110	433					
8	960	378					
9	750	295					
10	610	240					

Key Blank Mfr: **Blank #:**  
Silca TOY43AT4

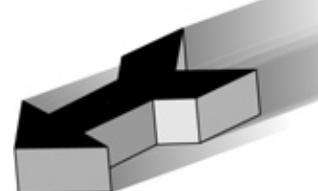
**Toyota 50001-69999**

Copyright 1994 - 2001  
WH Software

**Align: Tip stop (Left Insertion)**

**The National Locksmith®**

**Cut Along Outside of Card and Laminate To Use**



**Code Card**  
For the  
**1200PCH™**

Courtesy of  
**INSTA-CODE 2002™** from  
The National Locksmith

## **Toyota 50001-69999**

### **HPC 12000CMB™**

HPC: N/A Cutter: CW-1011

### **Silca Unocode**

UnoCode Card No.: 1420 Vice/Adapter V100 Standard

### **HPC Codemax™**

DSD: N/A Jaw: A

### **Curtis**

Cutter: 1011

### **Framon**

Cam Set: N/A  
Carriage: N/A  
Clipper: N/A

### **A-1 Pak-A-Punch™**

Cuts Start At: 404 Cutter: N/A  
Spacing: .0551 / .0826 Alternating  
Block #: N/A Depth Increment: .0255  
Key Clamping: Key aligned using left side of vice

### **ITL**

Quick Change Kit: N/A  
Punch And Die: N/A

## **Toyota 50001-69999**

### **HPC 12000PCH™**

HPC: N/A Punch: N/A  
Jaw: N/A

### **Silca Unocode**

UnoCode Card No.: 1420 Vice/Adapter V100 Standard

### **HPC Codemax™**

DSD: N/A Jaw: A

### **Curtis**

Cutter: 1011

### **Framon**

Cam Set: N/A  
Carriage: N/A  
Clipper: N/A

### **A-1 Pak-A-Punch™**

Cuts Start At: 404 Cutter: N/A  
Spacing: .0551 / .0826 Alternating  
Block #: N/A Depth Increment: .0255  
Key Clamping: Key aligned using left side of vice

### **ITL**

Quick Change Kit: N/A  
Punch And Die: N/A

# KEY CODES

## Toyota, Part 3

### 50001-69999

**Manufacturer:** Toyota

**Code Series:** 50001 - 69999

**Key Blanks:**

**Silca:** TOY43AT4

**Number of Cuts:** 10

**M.A.C.S.: 2**

**Key Gauged:** Tip

**Cut to Cut Spacings:**

.0551/.0826 Alternating

**Cut Depth Increments:** .0255

**Spacings (Framon):**

1 - .404

2 - .459

3 - .541

4 - .596

5 - .679

6 - .734

7 - .816

8 - .871

9 - .954

10 - 1.009

**Depths:**

1 = .325

2 = .299

3 = .274

4 = .248

**HPC 1200CMB**

**Code Card:** N/A

**Jaw:** A

**Cutter:** CW-1011

**Gauge From:** Tip

**HPC 1200PCH (Punch):**

**PCH Card:** N/A

**Punch:** N/A

**Jaw:** A

**Silca UnoCode**

**Card Number:** 1420

**HPC CodeMax**

**DSD #:** N/A

**Jaw:** A

**Cutter:** CW-1011

**Curtis No. 15 Code Cutter**

**Cam-Set:** N/A

**Carriage:** N/A

**Framon #2**

**Cuts Start at:** .404

**Cut to Cut Spacing:**

.0551/.0826 Alternating

**Block #:** N/A

**Depth Increments:** .0255

**Cutter:** N/A

**Key Clamping Info:** Key aligned using left side of vise/spacing clip.

**A-1 Pack-A-Punch**

**Quick Change Kit:** N/A

**Punch:** N/A

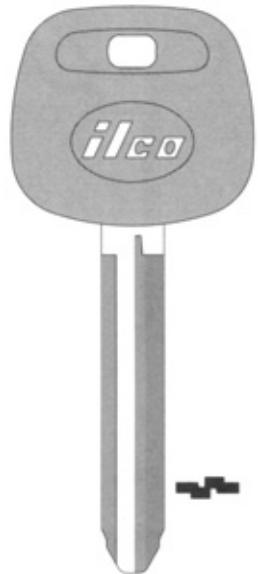
**Die:** N/A

**ITL 9000 & 950**

**Manufacturer ID:** N/A

**ECM 200**

N/A



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54732	4323232244	54775	2123213232	54818	1123123233	54861	1123113244	54904	1222434311	54947	1222434222
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54738	3223232123	54781	1223212234	54824	2223123243	54867	2223112243	54910	3322433444	54953	3322432243
54739	3423232121	54782	1123212134	54825	2123123234	54868	2123112234	54911	2122433343	54954	2322432134
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# Toyota, Part 3

## 50001-69999

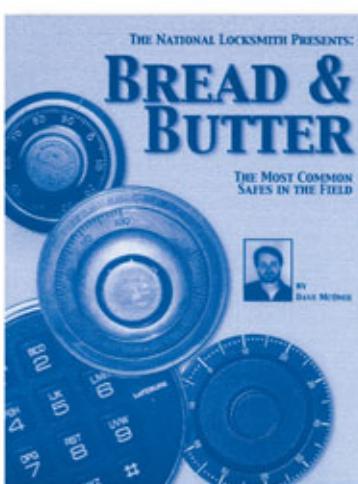
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# Toyota, Part 3

## 50001-69999

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# Bread & Butter



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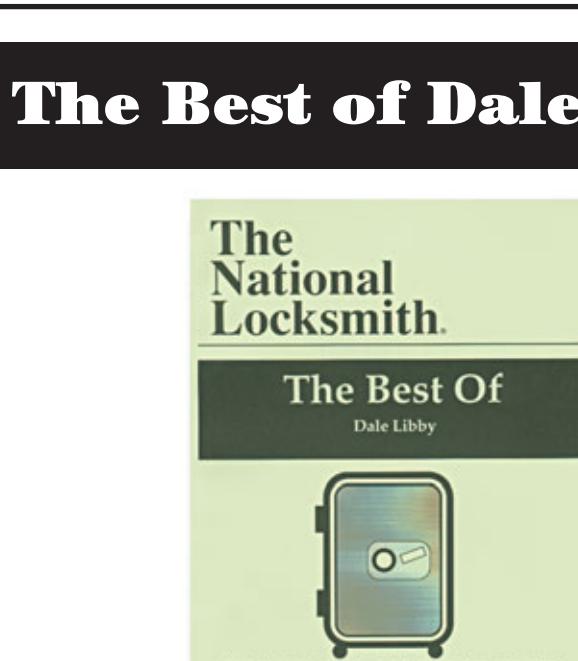
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# Toyota, Part 3

## 50001-69999

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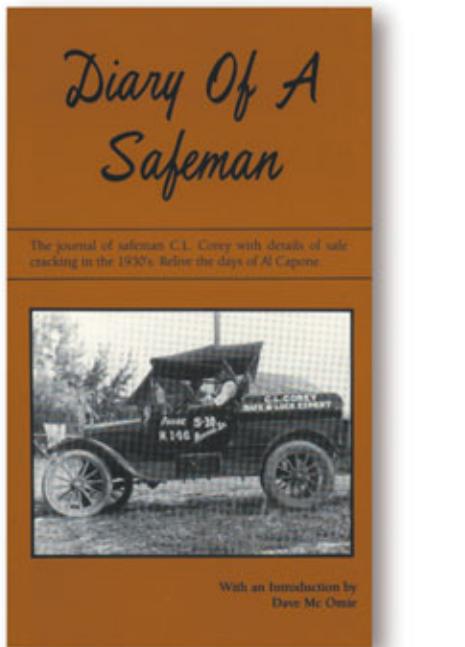
#DALE

# Toyota, Part 3

## 50001-69999

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## Diary Of A Safeman



This book is a real gem...the private safe diary of old time safecracker C.L. Corey.

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#DIARY

# Toyota, Part 3

## 50001-69999

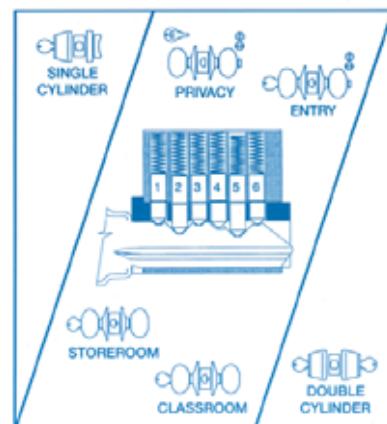
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# Door Lock Encyclopedia

**The National Locksmith®**

Guide:

## *Door Lock Encyclopedia*



by Robert G. Sieveking

The ability to remove a lock from a door, disassemble the mechanism, and remove the lock cylinder for service is not always a simple straightforward task.

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#DLE



# Toyota, Part 3

## 50001-69999

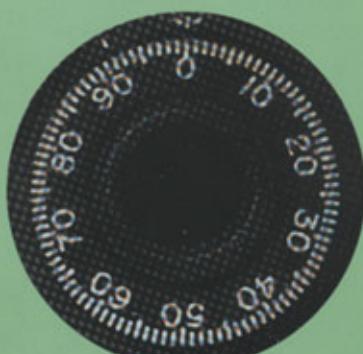
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**The National Locksmith.**

Guide to:

*Drilling Safes*

This book contains information on how security specialists can open just about any safe using tried and true techniques known by the masters. This information is intended for security personnel only.



by Carl Cloud

## Drilling Safes

One of the most expert safemen in the country, Carl Cloud has written a very important book on safe opening.

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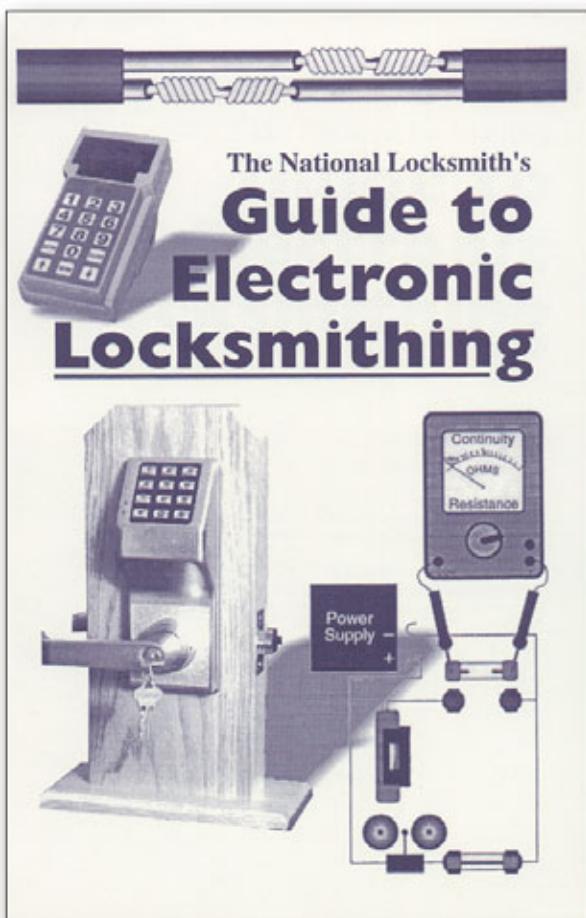
#DS - 1

## Toyota, Part 3

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56664	1223342243	56738	2323232123

# Electronic Locksmithing



Everyone knows there's big money in selling, installing and servicing electronic security such as mag locks, electronic strikes, and simple access control.

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#EL - 1

# Toyota, Part 3

## 50001-69999

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56765 3323221243	56799 3323124322	56833 1123122133	56867 2123112243	56901 3422434322	56975 2122324312
56766 2323221132	56800 2323124321	56834 3423122123	56868 1223112234	56902 3222434321	56976 1122323444
56767 2123213444	56801 2223124312	56835 3223121244	56869 4323112134	56903 2122434312	56977 3422323434
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56771 3323213344	56805 4323123432	56839 1123121134	56873 2323111244	56907 2122433432	56981 1222323343
56772 3223213312	56806 3423123423	56840 4323113444	56874 2223111243	56908 1122433423	56982 4322323244

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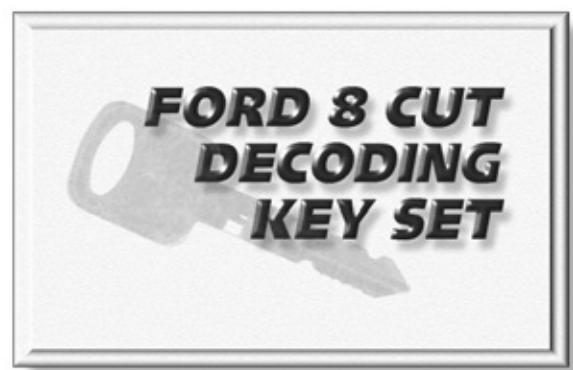
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56948 3422343312	57022 2322123312

## Toyota, Part 3

### 50001-69999

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57049	1221344422	57123	2321333211	57197	1121321134
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57051	4321344343	57125	1221332343	57199	3421234343
57052	3421344334	57126	4321332332	57200	3321234312
57053	3221344333	57127	3321332321	57201	3221233444
57054	2321344332	57128	3221332321	57202	2321233434
57055	2221344323	57129	2321332311	57203	2221233423
57056	2121344322	57130	2221332244	57204	1221233422
57057	1221344321	57131	2121332243	57205	1121233421
57058	1121344312	57132	1221332234	57206	4321233312
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57060	3421343443	57134	3321332134	57208	3321233243
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57090	3421342221	57164	3421323423	57238	2221213343
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57094	2121342123	57168	1221323343	57242	4321213244
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## Ford 8 Cut Decoding Key Set



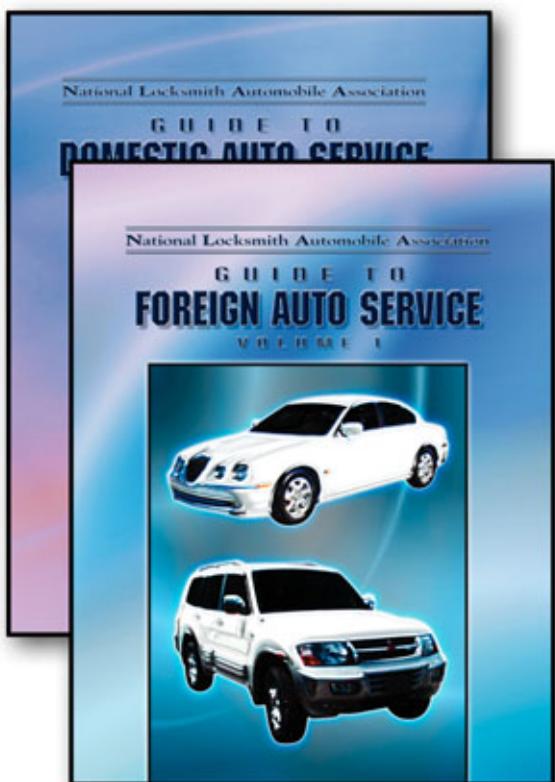
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57245	3221213233	57319	3212433421	57393	2212322343
57246	2321213232	57320	2212433344	57394	1212322334
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# Toyota, Part 3

## 50001-69999

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57470 2212122344	57544 4311322321	57618 1244331132	57632 3344321243	57646 1244233321	57660 1244232221
57471 1212122343	57545 2311322321	57619 2344324343	57633 1244321132	57647 2344233311	57661 2344232133
57472 4312122332	57546 1211322244	57620 3344323434	57634 2344234423	57648 3344233243	57662 3344232123
57473 2312122244	57547 3211322234	57621 1244323423	57635 3344234421	57649 1244233234	57663 3444232121
57474 1112122243	57548 1211322232	57622 2344323421	57636 1244234343	57650 2244233232	57664 2244232112
57475 3212122134	57549 3211322133	57623 3344323312	57637 2244234333	57651 3244233222	57665 3244231244
57476 2212122133	57550 2111322132	57624 1244323244	57638 3244234323	57652 3344233212	57666 3444231234
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57540 3211323221	57614 3444332243				

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## 50001-69999

57671	3244224312	57745	1243343232	57819	2243124312	57893	2234431243	57967	2332443444	58041	2234322311
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# Toyota, Part 3

## 50001-69999

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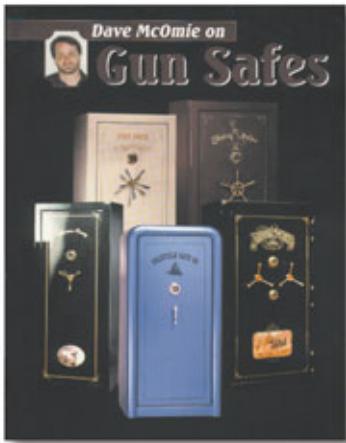
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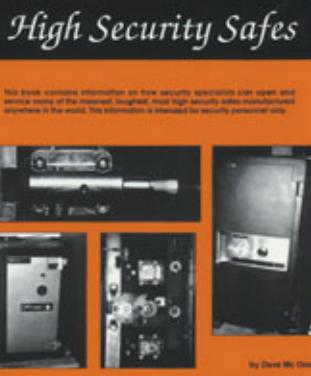
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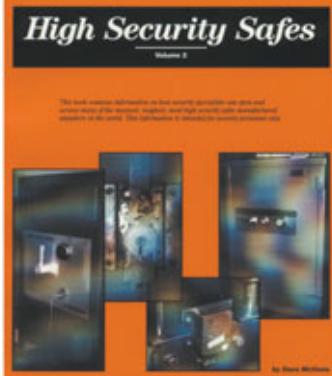
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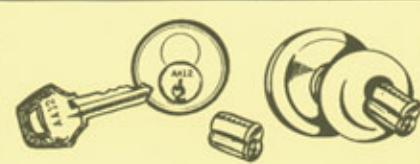
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## 50001-69999

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- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

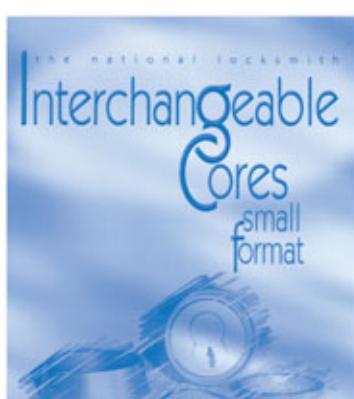
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			59645 3244233343	59719 2243433234	
			59646 3444233312	59720 2243433223	

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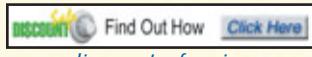
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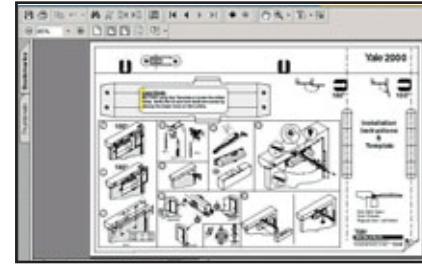
**Yale Security Group**

<http://www.yalesecurity.com/>

This is one of the better locksmith oriented web sites we have ever seen. Among the companies within the Yale Security Group are: ASSA/Abloy, Corbin/Russwin, Intellikey, Norton, Rixon and Yale.

Besides tons of company information, you can review a great depth of product information online. And one of the best sections of all is under the Literature button. There, you can pull down installation instructions and templates for most of the products.

Also, a product selector walks you through the process of correctly specifying an electronic door control or electronic strike. Also of interest is a Training button, where you can get class information and register online. Nice site!

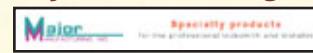


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# TEST DRIVE!

**H**ow many times have you wished you had a third hand? For a service technician, there are always times when a third hand would be invaluable, especially when installing door hardware. There are always times when it would sure be nice to have someone "hold this in place," or "help move that there." Sometimes two hands just aren't enough.

Knowing this, A-1 Security Manufacturing Corp. has developed the K100 Kelly-Klamp.

#### **PRODUCT:**

The Kelly-Klamp is designed to assist with the installation of electromagnetic lock installation. It is designed to hold the lock in a predetermined location, allowing you to complete the installation single handedly.

We all know the difficulty of installing hardware that is positioned over our head, or working off a ladder to reach something. The fatigue factor greatly increases when working with our hands over our heads, and we all know the potential hazards of working from a ladder. Neither of which make for ideal working conditions. If you have a number of electromagnetic locks to install, holding the lock with one hand over your head and trying to drill mounting holes with the other, or just driving mounting screws with the other, would be rather fatiguing rather quickly. Not to mention the possibility of the lock slipping out of your hand and smacking you on the forehead. Yes, there is an easier way, and the Kelly-Klamp offers it.

#### **DESIGN:**

The Kelly-Klamp consists of two self-adjusting arms that clamp on top of the

# Kelly Klamp

by A-1 Security Manufacturing Corp.



doorframe. A simple five-point knob with a nylon padded leveling guide is used to secure the electromagnetic lock in place. It's a simple, effective, easy to use design.

#### **CONSTRUCTION:**

Made from lightweight anodized aluminum, and weighing in at a mere 10 ounces, the Kelly-Klamp is sure to last a lifetime. The only foreseeable part that may need replacing over time is the arm return torsion springs.

#### **HOW to USE:**

The Kelly-Klamp will work on doorframes up to 9-1/2" wide. Simply spread the spring-loaded arms until it fits over the doorframe. The spring-loaded arms will close and self align the jig in the center of the frame.

Place the electromagnetic lock in the desired position, center the Kelly-Klamp with the electromagnetic lock and tighten the five-point knob clockwise until the lock is snug against the header. Drill the mounting holes, drive in the mounting screws, remove the Kelly-Klamp and all that's left is to wire the electricity. It doesn't get much easier than that.

#### **PRICE:**

The K100 Kelly-Klamp carries a suggested retail price of \$74.50.

#### **MODIFICATIONS & IMPROVEMENTS:**

The only criticism I have with the Kelly-Klamp is it will only work on doorframes that have a top ledge for the jig to hang from. Almost all interior doorframes will have a top lip. However, this is not true with many exterior brick, or cinder block constructions. Often there is not a top lip, for which the Kelly-Klamp would not be applicable.

There is, however, a simple solution. By drilling and tapping two 1/4" holes near the top of the holding arms and threading about a 4" thumb-screw in,

the Kelly-Klamp can now be used on most threshold styles. Simply extend the holding arms, lock down the thumbscrews to the brick or cinder block header, and your back in business.

#### **COMMENTS:**

This is one of those tools that most of us wouldn't think about. When installing electromagnetic locks, the normal process is to place a template or the lock itself on the frame header. Hold it above our heads with one hand and mark the mounting holes with a scribe or pencil. Remove the template or lock and drill the mounting holes. Reposition the lock on the header, holding it with one hand while we balance a mounting screw precariously on the tip of a screwdriver and aim it at the hole. As the screw falls off, we remove the lock, bend over to retrieve the screw that has rolled under a desk, and start the process over again. They say the second time is the charm. You've done this, haven't you? Yes you have. The Kelly-Klamp is looking better all the time, isn't it? Yes it is.

If you install electromagnetic locks, I don't see why you would want to be without the Kelly-Klamp... unless of course, you are the type who just likes doing things the hard way.

*For more information phone: (877) 725-2121, (804) 359-9003; Fax: (804) 359-9415; Email: fmc@demandal.com; Web: www.demandal.com. Circle 241 on Rapid Reply. TNL*

#### **IN SUMMARY:**

**DESCRIPTION:** The Kelly-Klamp is designed to ease the installation of electromagnetic locks.

**PRICE:** \$74.50

**COMMENTS:** It's a simple, effective, easy to use tool.

**TEST DRIVE RESULTS:** I don't see why you would want to be without the Kelly-Klamp.